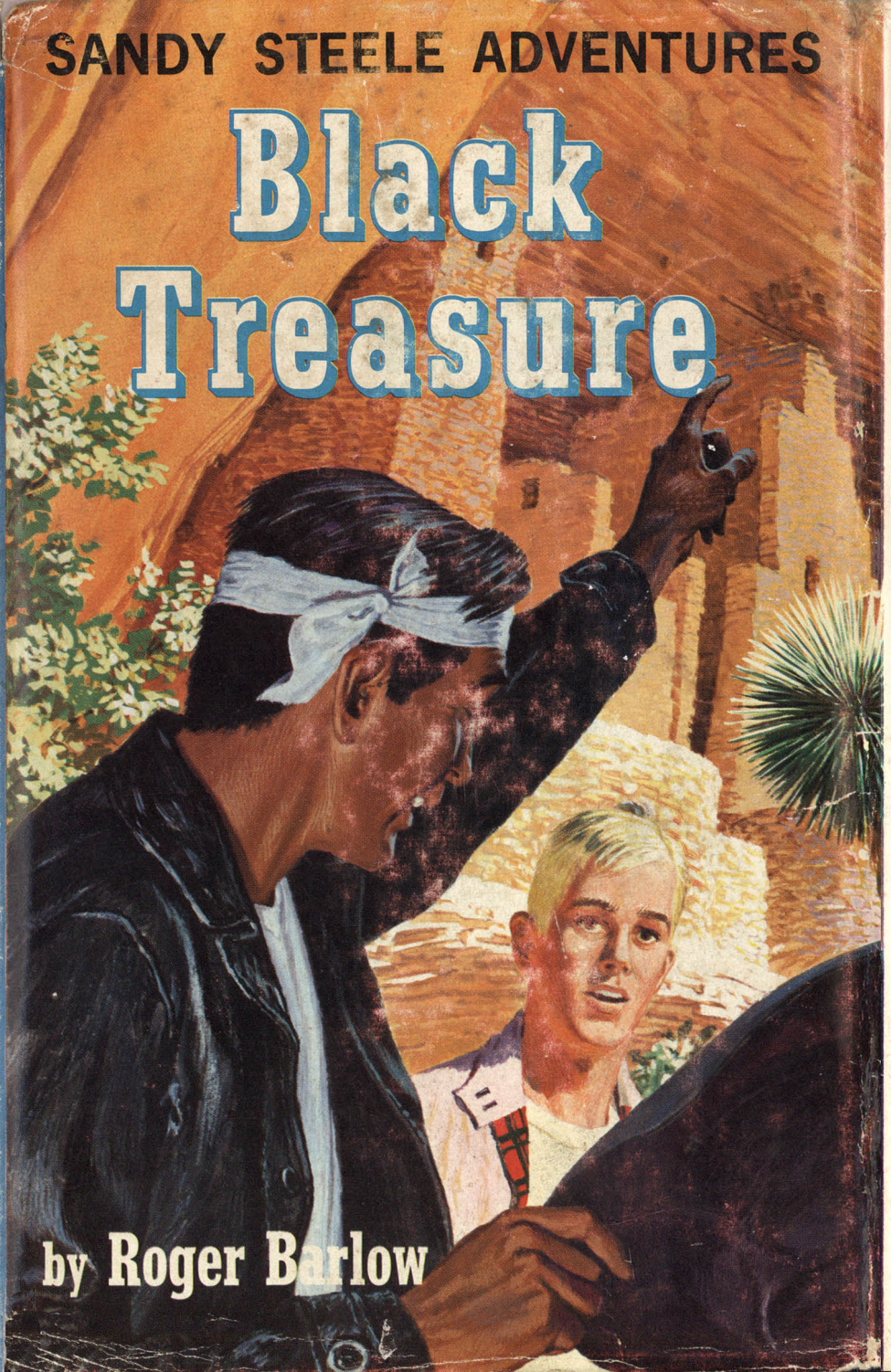
SANDY STEELE ADVENTURES

Black Treasure



by Roger Barlow

SANDY STEELE and Quiz Taylor constructed an oil reservoir analyzer as their entry in the Science Fair. They didn't win first prize, but they *were* offered summer jobs in the oil fields of Four Corners. This book is the story of that summer.

The boys learned about oil and uranium. They came to know something about the problems of the Indians on the reservations. Finally, they helped their friend and employer outwit an unscrupulous operator when they cleared up the puzzling question of why a man who was credited with four touchdowns claimed only three.

$1.00

SANDY STEELE
ADVENTURES
by Roger Barlow

If this is the first Sandy Steele Adventure you have read, you will undoubtedly want to know more about Sandy and his friends. The back of the jacket lists other titles in the series. Choose any one of them and be sure of entertaining reading.

Whether Sandy is at home in Valley View, California, or traveling about the country, he meets interesting people and finds exciting things to do. Join him on his adventures and have fun!

Jacket painting by Paul Nonnast

SANDY STEELE ADVENTURES

1. BLACK TREASURE

Sandy Steele and Quiz spend an action-filled summer in the oil fields of the Southwest. In their search for oil and uranium, they unmask a dangerous masquerader.

2. DANGER AT MORMON CROSSING

On a hunting trip in the Lost River section of Idaho, Sandy and Mike ride the rapids, bag a mountain lion, and stumble onto the answer to a hundred-year-old mystery.

3. STORMY VOYAGE

Sandy and Jerry James ship as deck hands on one of the "long boats" of the Great Lakes. They are plunged into a series of adventures and find themselves involved in a treacherous plot.

4. FIRE AT RED LAKE

Sandy and his friends pitch in to fight a forest fire in Minnesota. Only they and Sandy's uncle know that there is an unexploded A-bomb in the area to add to the danger.

5. SECRET MISSION TO ALASKA

A pleasant Christmas trip turns into a startling adventure. Sandy and Jerry participate in a perilous dog-sled race, encounter a wounded bear, and are taken as hostages by a ruthless enemy.

6. TROUBLED WATERS

When Sandy and Jerry mistakenly sail off in a stranger's sloop instead of their own, they land in a sea of trouble. Their attempts to outmaneuver a desperate crew are intertwined with fascinating sailing lore.

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Black Treasure

ROGER BARLOW

SIMON AND SCHUSTER

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BLACK TREASURE

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STORMY VOYAGE

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SECRET MISSION TO ALASKA

TROUBLED WATERS

Sandy Steele Adventures

BLACK TREASURE

BY ROGER BARLOW

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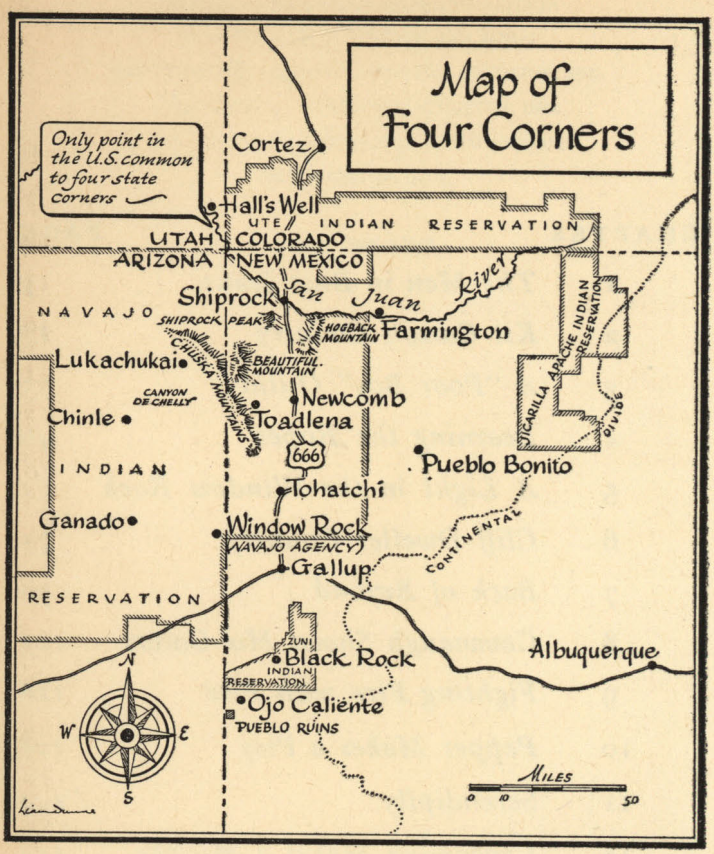
Map of Four Corners
Only point in the U.S. common to four state corners
Cortez
Hall's Well
UTE INDIAN RESERVATION
UTAH
COLORADO
ARIZONA
NEW MEXICO
Shiprock
San Juan River
NAVAJO
SHIPROCK PEAK
CHUSKA MOUNTAINS
HOGBACK MOUNTAIN
Farmington
JICARILLA APACHE INDIAN RESERVATION
OJO
Lukachukai
BEAUTIFUL MOUNTAIN
CANYON DE CHELLY
Chinle
Newcomb
Toadlena
666
INDIAN
Pueblo Bonito
Tohatchi
Ganado
Window Rock
(NAVAJO AGENCY)
CONTINENTAL
Gallup
RESERVATION
ZUNI
Black Rock
INDIAN RESERVATION
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CHAPTER ONE

The Man in Blue Jeans

HIGH JINKS were in order as the Regional Science Fair drew to a close in the big auditorium at Poplar City, California. A board of judges had selected prize-winning exhibits entered by high-school students from Valley View, Poplar City and other nearby communities. Now the winners were blowing off steam while teachers who had supervised the fair sat in quiet corners and fanned themselves wearily.

"Step right up, ladies and gentlemen," Pepper March whooped like a circus barker as he strutted in front of his First Prize winner, a glittering maze of electronic equipment. "Broadcast your voice over my beam of light. The very newest thing in science. Built through the co-operation of Valley View's own Cavanaugh Laboratories. Step right up. . . . Yes, miss?" A girl had approached the exhibit, wide-eyed. "Please speak into this microphone."

"What do I say?" As she spoke, a quivering pencil of light leaped from a black box in the booth and her words thundered from a loud-speaker in the balcony.

"Oh, recite 'Mary Had a Little Lamb,' " suggested the big blond boy, and grinned.

" 'Mary,' " boomed the girl's voice from the rear of the hall as Pepper twiddled a mirror that deflected the light beam to a second loud-speaker, " 'had a little lamb.' " (Those words seemed to come out of the floor.) " 'Its fleece was white as snow.' " (The last phrase blared from a chandelier.)

"Good old Pepper! Grandstanding again!" muttered Sandy Steele as the crowd cheered. Sandy stared glumly at a small sign reading HONORABLE MENTION that perched on the exhibit which he and his pal Quiz Taylor had entered in the fair. It wasn't fancy-looking like Pepper's, he had to admit. It was just a mound of wet cardboard sheets stuck full of pins, plus a homemade control panel and some batteries. "Our's *was* better," he added.

"I agree," Quiz sighed. "After all the work we put into this thing! Molding sheets of cardboard to the shape of underground rock layers. Soaking them with salt water so they'll carry electric currents that imitate the direction in which oil

deposits flow." He hooked a wire to one of the pins and pressed a button. A flashlight bulb on the control panel winked at him mockingly. "We sure deserve something better than a Mention!"

"Step this way, folks," Quiz called halfheartedly to the passers-by. "Learn how petroleum can be located, thousands of feet beneath the earth."

Nobody paid any attention except one Valley View boy who was pushing his way toward Pepper's booth, a phonograph record under one skinny arm.

"Sour grapes," jeered the boy. "You and Sandy better forget that mess. Come over and watch Pepper play this stereo record over his beam. It'll be something!"

"Shall we?" Sandy looked at his friend miserably.

"Unh-uh," answered the short, round-faced boy. "Here comes a customer—I think."

A suntanned little man in faded blue shirt and jeans had ambled up to their booth and was studying the exhibit with his gray head tilted to one side.

"A reservoir behavior analyzer, huh?" he said. "Represents the Four Corners area. Right?"

"Why . . . yes, sir." Sandy stared at him, openmouthed. "We built it to represent the geo-

logical structure of the country where the boundaries of Utah, Colorado, Arizona and New Mexico meet. This map and card explain—"

"I know the Four Corners," grunted the little man as he sized up the tall, sandy-haired youngster. "Is your gadget accurate?"

"As accurate as we could make it with the survey maps we could find."

"Hmmm." Their visitor's sharp eyes studied the gray mound. "What happens if I should drill an oil well here, in the northwest corner of the Navajo Indian reservation?" He pointed with a lean finger.

Sandy moved a pin to the spot he indicated, connected it to the control panel with a length of wire, and pressed a switch.

Nothing happened!

Quiz groaned. Why couldn't the thing show off when they wanted it to?

"If you drilled there, sir, you'd just have a dry hole," Sandy said with more confidence than he felt. "That location must be on the far fringe of the oil pool."

"Right!" The little man grinned from ear to ear, showing a fine white set of false teeth. "I did drill a wildcat well there. She was dry as a bone. My ninth duster in a row. . . . Now what happens if I drill here, near the bed of the San Juan River?"

This time a bulb glowed brightly when they stuck their pin into the cardboard.

"We can't be sure, sir," Sandy hesitated. "We don't know too much about geology. Besides, oil is like gold. It's where you find it, and the only way you find it is by drilling for it. But I'd guess that, in the neighborhood you indicated, you'd stand a chance of hitting a thousand barrels per day."

"Eight hundred and fifty barrels," corrected the man in the blue jeans. "The well I drilled on the San Juan was the only thing that kept me out of bankruptcy."

A blare of jazz from Pepper's loud-speakers, now working in unison, cut off further conversation and gave the boys a chance to study their strange acquaintance.

"Why don't you go over and take in that beam-of-light exhibit?" Sandy said when Pepper had brought the sound down to bearable levels. "It won first prize."

"That pile of expensive junk?" sniffed the little man. "All the kid did was to borrow some apparatus from Red Cavanaugh's Valley View Laboratory. If I know Red—and I do know the big fourflusher well—he didn't make the boy do a lick of real research on it. . . . Oh!" Again that wide grin. "You think I'm crazy and want to get rid of me, don't you? Here."

He dug into his jeans and came up with a greasy card which read:

THE FOUR CORNERS DRILLING COMPANY
JOHN HALL, PRESIDENT
FARMINGTON, N. M.

"Guess I should have got dressed up for this shindig," Hall apologized, "but I just got in from Farmington. I read about your analyzer in the *Valley View News* when you won first prize at your high-school science fair last month. Used to live there. That's why I still get the paper. Your dingus should have received first prize here too, instead of that voice-cast thing."

"Say! You came all this way just to see our exhibit? Thanks!" was all Sandy could think of to say.

As the auditorium lights blinked to indicate that the fair was closing, Hall added, "Got time for a bite? I have a proposition I'd like to sound you out on."

At a nearby diner, the oilman ordered full meals for all of them.

"Here's my proposition," he said when the boys couldn't eat another mouthful. "I'm a small wildcat operator. That means I hunt for oil in places that are so wild and woolly that only wildcats can live there. Once or twice I've struck it rich. Should have retired then, but there's something

about oil exploration that gets in a feller's blood. So I went out, drilled some dry holes, and lost my shirt.

"Right now I'm strapped until my new field pays off—if it does. But I think I'm onto something big in the Four Corners and I need help. You boys must have a working knowledge of geology to build an analyzer as good as that. How about working for me this summer?"

"Sandy's the rock hound," Quiz said and hesitated. "I . . . I've only read up on it in books."

"All I know is what Dad has told me," Sandy remarked. "I couldn't have built the exhibit without Quiz's help."

"Forget the mutual-admiration-society stuff," said Hall. "Would you both like to spend your vacations in the Four Corners, working as roustabouts and helping me out wherever else you can? It won't be easy. But when you get through you'll know a lot about oil, geology, how to get along with Indians, and I don't know what all.

"You'll be out on the desert in all kinds of weather. You'll chip rocks, hold stadia rods, sharpen tools and dig the trucks out of holes on those awful roads. Everything you learn will come in handy when you go to college. . . . You are going, aren't you?"

Sandy nodded but Quiz shook his head miserably.

"I doubt it," he said, "unless things at Dad's restaurant pick up."

"Nonsense," Hall snorted. "You can get a scholarship in geology if you've had experience in the field. Tell you what: I know your father slightly—he serves mighty good victuals. I'll go over to Valley View tomorrow and talk things over with him. I'll bet we can work something out for you.

"Here's another thing, though," he went on thoughtfully. "I've got almost every cent I own tied up in oil leases right now. I can't pay either of you very much—say forty dollars a week. You probably can do almost as well right at home."

"I'd rather work with you than wait on table," Quiz declared.

"Or cut lawns and things," Sandy added.

"It's settled then." Hall shook hands gravely. "See you in Valley View."

As they were leaving the diner, Pepper March came charging in with a flock of admiring Valley Viewers behind him.

"Wait up," Pepper whooped, grabbing his defeated rivals as they tried to dodge past him. "My treat. Come have a Coke while I tell you about my good luck."

"*Another* Coke!" Sandy groaned. He had practically lived on them during the science fair.

But curiosity got the better of him and he went back to the counter, followed by Quiz. By the time he found a stool, Pepper was holding forth.

"You know Mr. Cavanaugh, the man I got some of the stuff for my voice-caster from?"

"The man from whom you borrowed *all* your equipment," Sandy corrected between his teeth.

"That's what *you* think, Honorable Mention." Pepper turned to his admirers. "Anyway, he has a sideline: spends his summers hunting uranium. Also, he's the same Red Cavanaugh who was All-American quarterback for State U. in 1930. He's the fellow who ran three touchdowns against California in the Thanksgiving game that year."

"There was a Cavanaugh who made All-American," Quiz agreed as he scratched his round head, "but I thought . . ."

"See!" cried Pepper. "Quiz knows all there is to know about football. He's heard about Red. Well, Mr. Cavanaugh attends all the Valley View games. Says he likes the way *I* run touchdowns." Pepper leered at Sandy, who was not always the spectacular player that Pepper was. "Also, Mr. Cavanaugh appreciates the plugs I gave to his laboratory whenever I explained my voice-caster, so what do you think . . . ?"

"He's going to install you as a loud-speaker in one of his TV sets," Quiz suggested.

"Nah!" Pepper stopped the laughter with a lordly, upraised hand. "He's giving me a summer job. I'm going to help him hunt uranium."

"Where?" Sandy gave his pal a stricken look.

"Where? Why, the place where there's more uranium than almost anywhere in the United States. But you wouldn't know where that is."

"Oh, no," groaned Quiz. "Not the Four Corners. Not there! Ain't there no justice?"

"What do you mean?" Pepper looked at him doubtfully.

"I mean Sandy and I have jobs there too, and Four Corners is going to be awfully crowded this summer."

"Oh." Some of the wind went out of Pepper's sails. Then he brightened. "I'll buy another round of Cokes if either of *you* is going to get sixty dollars a week," he crowed.

CHAPTER TWO

Kit Carson Country

"THIS SURE ISN'T MY IDEA of a boom town!" Sandy grumbled as he and Quiz got off the eastbound Greyhound at Farmington, New Mexico, dropped their dusty bags and stood watching the early morning bustle on the little town's wide streets.

"Yeah." Quiz wagged his head. "The Wild West shore ain't what she used to be, pardner. No twenty-mule-team wagons stuck in Main Street mudholes. No gambling dives in evidence. No false store fronts. No sheriff in a white hat walkin' slowlike down a wooden sidewalk to shoot it out with the bad man in a black hat. Ah, for the good old days."

"Oh, go fly a jet." Sandy grinned. "Let's look up Mr. Hall. Funny, his giving us his home address. He must have an office in town."

They strolled along, noticing the new stores and office buildings, the modern high school.

Farmington would never become a ghost town. It was building solidly for the future.

Suddenly Quiz grabbed his friend's arm.

"Look at that oilman who's just made a strike," he said. "We'll ask him if he knows Mr. Hall."

"How do you know that he is, and has?" Sandy demanded as they approached a lanky stranger.

"Because he's wearing a brand-new Stetson and new shoes, of course," Quiz explained, as to a child. "Drillers always buy them when their well comes in."

"Trust you to know something like that," Sandy said in mock admiration.

"Well now," drawled the Farmingtonian when they put their question, "you'd have to get up earlier than this to catch John Hall in town. John keeps his office in his hat. Might as well spend the day seeing the sights, and look him up at his motel when he gets back from the Regions tonight."

"What sights?" asked Sandy when the oilman, obviously a transplanted Texan, had stumped away in high-heeled boots that must have hurt his feet. "Those mountains, maybe? They look close enough to touch. Let's walk out to them."

"Don't let this clear, thin air fool you," Quiz warned. "Those mountains are probably twenty miles away. We'd need a car to—"

A great honking and squealing of brakes behind them made the boys jump for safety. As they

turned to give the driver what-for, Pepper March stuck his curly head out the window of a new jeep that was towing an equally new aluminum house trailer as big as a barn.

"Welcome to our fair city," Pepper shouted. "Saw you get off the bus, so I prepared a proper reception. How about a guided tour while I run this trailer over to Red's camp?"

"How long have you been here?" Sandy asked as they climbed aboard.

"Red flew me over last Friday in his Bonanza. I've got the hang of his entire layout already. Nothing to it, really."

As he headed the jeep for the mountains, Pepper kept up a monologue in which skimpy descriptions of the countryside were mixed with large chunks of autobiography.

"Every square mile of this desert supports five Indians, fifty sheep, five hundred rattlesnakes and fifty thousand prairie dogs," he joked as they left the pavement for a winding dirt trail. They bounced madly through clumps of sagebrush, prairie-dog colonies, and tortured hills made of many-colored rock.

"These roads wear out a car in a year, and you have to put in new springs every three months," he added as they hit a chuckhole that made their teeth rattle.

"Look at those crazy rock formations," he said

later while the boys sweated and puffed to jack up the rear end of the trailer so it could get around a particularly sharp hairpin turn in the trail. (*Now* they knew why Pepper had extended his invitation for a tour!) "No telling what minerals you might find if you used electronic exploration methods on scrambled geology like this. Why, only last night, while we were sitting around the campfire at Elbow Rock, I said to Red: 'Red,' I said, just like that—we've become real pals already, you know—'Red,' I said, 'why don't we branch out? Why don't we look for oil as well as uranium, now that we're out here?' And Red said to me: 'Pepper,' he said—"

" '—when did you get your Ph.D. in geology?' " Sandy cut in.

"Nothing like that at all! 'Pepper,' he said, 'you're right on the electron beam. We'll organize the Red Pepper Oil Exploration and Contracting Company and give John Hall and those other stick-in-the-muds a run for their money.' Oops! Hope we didn't break anything that time!"

The jeep's front wheel had dropped into a pothole with a terrific thump.

They found that the axle had wedged itself against a rock. Thirty minutes later, while they were still trying to get it loose, a rattletrap car pulled up beside them and an Indian stuck his flat, mahogany-colored face through its window.

"Give us a hand—please," Pepper ordered.

The newcomer started to get out. Then his black eyes settled on the lettering on the side of the trailer:

CAVANAUGH LABORATORIES
FARMINGTON, N.M. & VALLEY VIEW, CAL.

"Cavanaugh! Huh!" snorted the Indian. He slammed the door of his car and roared off in a cloud of yellow dust.

"Those confounded Indians," snarled Pepper, staring after him in white-faced fury. "I'd like to . . . Oh, well. Come on, fellows. Guess we've got to do this ourselves."

They finally got the jeep back on the trail and drove the twenty miles to Elbow Rock without further mishap. There Pepper parked beside a sparkling trout stream. They raided the trailer's big freezer for sandwich materials and ate lunch at a spot overlooking a thousand square miles of yellow desert backed by blue, snowcapped peaks. Pepper was at his best as a host. For once in their lives, Sandy and Quiz almost liked him. At least here he seemed much pleasanter than he did at home, lording it over everyone—or trying to.

In the cool of the afternoon—85 degrees in the sun instead of the 110 degrees the thermometer had shown at noon—they rode the jeep back to

Farmington by way of a wide detour that took them within sight of the San Juan River gorge.

"I wanted to show you those two oil-well derricks over yonder," Pepper explained. "They're a mile and a half apart, as the crow flies. But, because they're on opposite sides of the river, they were 125 long miles apart by car until we got that new bridge finished a few months ago. Shows you the problems we explorers face."

"The San Juan runs into the Colorado, doesn't it?" Quiz asked as he studied the tiny stream at the bottom of its deep gorge, under the fine new steel bridge.

"Yep. And thereby hangs a tale. Mr. Cavanaugh —Red, I mean—has found state documents down at Santa Fe showing that the San Juan used to be navigable. But the confounded dumb Indians swear it can't be navigated. If boats *can* go down the stream, even during part of the year, the river bed belongs to the Federal government. If the stream *can't* be navigated, the Navajos own the bed. That's the law! While the argument continues, nobody can lease uranium or oil land near the river. Red says that, one of these days, he's going to prove that—oops! I'm talking too much!"

Pepper clammed up for the first time they could remember. He said hardly a word until he dropped them off at Hall's motel.

"I don't get it," Quiz said to his chum as they walked up a graveled path from the road to the rambling adobe building.

"Don't get what?" Sandy wanted to know.

"This uranium hunting business Pepper's got himself into. I read in *Time* a while back that the Federal government stopped buying uranium from prospectors in 1957. Since then, it has bought from existing mills, but it hasn't signed a single new contract. Cavanaugh doesn't own a uranium mill. So why is he snooping around, digging into state documents and antagonizing the Indians?"

"I only met him once, when he snooted our exhibit as a judge at the regional science fair," Sandy replied. "Can't say I took to him, under the circumstances."

"There's something phony about that man. If only I could remember . . . something to do with football, I think." Quiz scratched his head, but no more information came out.

They found Mr. Hall, dressed as usual in faded levis and denim shirt, sitting with several other guests of the motel on a wide patio facing the setting sun.

"Well, here are my roustabouts," the little man cried with a flash of those too-perfect teeth. "I was beginning to be afraid that you had lost yourselves in the desert."

He introduced them to the owners of the place, two maiden ladies from Minnesota who plainly were having the time of their middle-aged lives here on the last frontier. The Misses Emery, as alike as two wrinkled peas, showed the boys to their room, a comfortable place complete with fireplace and an air conditioner.

"Supper will be served in half an hour," said one.

"Don't be late," said the other.

The newcomers scrubbed the sticky dust off their bodies and out of their hair, changed into clothes that didn't smell of jeep, and were heading for the dining room when Mr. Hall overtook them.

"You may be wondering why I live out here on the edge of the desert," he said quietly. "One reason is that I like the silence of desert nights. Another is the good cooking. The most important reason, though, is that some of the Farmington places are pretty nasty to Indians and Mexicans. Me, I like Indians and Mexes. Also, I learn a lot from them when they let their hair down. Well, here we are. You'll find that the Misses Emery still cook like Mother used to. I'll give you a tip. Don't talk during supper. It isn't considered polite in the Southwest."

"Why is that?" Sandy wondered.

"It's a hang-over from cowpunching days. If

a ranch hand stopped to talk, somebody else grabbed his second helping."

After a silent meal, the guests gathered on the patio to watch the stars come out.

"Folks," said Mr. Hall, "meet Sandy Steele and Quiz Taylor. They're going to join my crew this summer. Boys, meet Miss Kitty Gonzales, from Window Rock, Arizona. She's going north in the morning to teach school in the part of the Navajo reservation that extends into Utah. Her schoolhouse will be a big trailer. Too bad you can't be her students, eh? But sixteen is a mite old for Miss Kitty's class."

Kitty was slim, in her late teens, and not much over five feet tall. She had an oval face, black hair and eyes, and a warm smile that made the newcomers like her at once.

"This is Kenneth White," Hall went on. "Ken works for the Bureau of Indian Affairs. When he talks, you listen!"

The white-haired man gave the boys handshakes that they felt for an hour.

"Chief John Quail, from the Arizona side of the Navajo reservation," Hall said next. "The chief is here to talk over an oil lease."

Chief Quail, a dark, heavily muscled Indian, wore a light-gray business suit that showed evidence of the best tailoring. He surprised the boys by giving them the limpest of handshakes.

"And Ralph Salmon, boss of my drill crew," Hall concluded. "Ralph's a southern Ute from Colorado. Do exactly as he says this summer if you want to learn oil."

The lithe, golden-skinned young Indian nodded, but did not shake hands.

"So you're off to your great adventure in the morning, Kitty," White said to break the conversational ice. He lighted a pipe and leaned against the patio railing where he could watch the changing evening light as it stole over the desert.

"I'm so excited I won't be able to sleep," the girl answered in a rich contralto voice. "It's all so wonderful. The oil lease money pouring in like this, after long lean years when starvation for the Navajos was just around the corner and it looked as though their reservation might be taken from them. Schools and hospitals being built all over. My wonderful new trailer with books and maps and even a kitchen and a shower for the children. Oh, my Navajos are going places at last." She gave an embarrassed laugh at her long speech.

"One place your Navajos can go is to Salt Lake City," Hall growled. "Get the state of Utah to settle that quarrel about who owns the land your schools and hospitals are being built on. Then I can get my hands on some leases up there."

"I thought the Navajo reservation was in New Mexico and Arizona," Sandy said.

"A small part of it is in southern Utah," Hall explained. "That's the part bounded by the San Juan River."

"The argument over school lands is less important than our other disputes," Chief Quail said carefully. He spoke good English but his words seemed to be tied together with string. Plainly, he had learned the white man's language not many years ago. "The real problem—the one that is, how do you say, tying up millions of dollars of lease money—is to have a correct boundary drawn around the Hopi reservation."

"The chief means," Hall explained for the boys' benefit, "that the Navajo reservation forms a large rectangle that completely surrounds a smaller square of land in Arizona where the Hopi Indians live."

"Not a square, Mr. Hall," Chief Quail objected. "The Hopis really own only a small triangle. Those primitive, stupid cliff dwellers claim thousands of Navajo acres to which they have no right. If I had my way in our Council, I would . . ."

"The Navajos *and* the Hopis are all grandmothers," Salmon cut in angrily. "Squabbling over money like palefaces! Spending their royal-

ties on things like schools and hospitals! When my tribe, the southern Utes, got its first royalty check, the Council voted to have some fun with the money. We spent it to build a race track for our fast horses!"

"Digger Indian!" The Navajo sneered at Salmon without moving a muscle of his broad face. "Fish eater! Soon you will waste all your easy money. When the oil runs out you will be running about naked again, living on roots and fried caterpillars like you used to!"

"Oh, no, John." The Ute's grin was just visible in the gathering darkness. "Maybe we'll go on the warpath and take what we need from you fat Navajo sheep herders, as we did in the good old days. Or—" he added quickly as the chief lunged to his feet—"we'll sing you to death. Like this!"

Salmon began a wailing chant that set everyone's teeth on edge. The Navajo stopped his advance as if he had struck a wall. He clapped his hands over his ears and, after a moment, stalked out into the night.

"You shouldn't have done that, Ralph," Hall said coldly. "Some day Chief Quail is going to take you apart if you don't stop baiting him."

"Can you actually sing people to death, Mr. Salmon?" Sandy said to break the tension.

"Of course not," the Ute answered softly. "But the chief *thinks* I can, and I wouldn't spoil his

belief for anything. We have a set-to like this every time we meet. Some of our medicine men can sing people *well,* though. They chant awhile and then pull the pain right out of your tooth, ear, or stomach."

"What does a pain look like?" Quiz asked, half convinced.

"Looks just like a fingernail about two inches long," the Ute answered. "It's bright red. If you strike it, it goes *tinnnggg,* like the reed of a saxophone."

"Stop your nonsense, Ralph," White commanded, "while I go out and smooth Quail's ruffled feathers." He followed the chief and brought him back five minutes later to receive an oily apology from his ancestral enemy.

"You Indians will be broke again, one of these days, if you keep quarreling among yourselves," Hall said then. "Crooked white men are hanging around the Four Corners. They're just waiting for something like that so they can trick you out of your oil and uranium rights, or even your reservations."

Everyone had to agree that this was true, so the little party settled down in reasonable harmony to watch the giant stars come out. Salmon produced a guitar after a while. Then he and Kitty sang Indian and Mexican songs together. Sandy particularly liked one that went:

I wander with the pollen of dawn upon my trail.
Beauty surrounding me, with it I wander.

"That's a Navajo song," the Ute said, grinning. "We sing it in honor of Chief Quail. Here's one by a white man that I like:

Mañana is a lovely word we all would like to borrow.
It means "Don't skeen no wolfs today wheech you don't shoot tomorrow."
An' eef you got some jobs to did, of which you do not wanna,
Go 'head and take siesta now; tomorrow ees mañana!

"Guess that's a hint we'd better take our siestas," Hall said to the boys. "Big day ahead mañana."

"This country sort of grows on one," Sandy said to Kitty as they shook hands. "I'm beginning to feel at home already."

"Oh, you haven't really seen anything yet," the girl answered. "If you and Mr. Taylor get up in the neighborhood of my school, look me up. I'll show you some of the wildest and most beautiful country on earth."

"Mother said I'd fall in love with the place." Sandy took a last look across the sleeping desert. "She was born not far from here. Met my father when he was working for the U.S. Geological Survey."

"How interesting," cried the girl. "Maybe my folks know her. What was her maiden name?"

"It was Ruth Carson."

"Oh!" Kitty snatched her hand out of his. "She's related to Kit Carson, isn't she?"

"The general was my great-uncle," Sandy said proudly. "That's why I'm so interested in this part of—"

He stopped because Kitty had backed away from him until her back pressed against the motel wall. As he stared, she spat into the dust of the patio in a most unladylike fashion before turning and running toward her room.

"What did I do to her?" Sandy gasped, open-mouthed.

"Kitty's mother is a Navajo," Chief Quail answered. "Back in Civil War days, Kit Carson rounded up the Navajos to take us away from our reservation. We went on the warpath and retreated into the mountains. Carson followed. His soldiers shot several dozen of us, and slaughtered all our sheep so we would either have to surrender or starve. Even today, many of us would rather

eat fish as the Utes do than touch one of Kit Carson's descendants!" He turned his back and marched off.

"Ouch!" Sandy groaned. "I certainly put my foot into it that time."

"Don't worry too much about it," said White. "Fact of the matter is that Kit Carson made a mighty good Indian Agent later on, and most Navajos admit it. He was the man who insisted that they all be returned to the reservation after the rebellion was over. He eventually died from overwork in behalf of 'his Indians.' Except for a few diehards, the Navajos won't hold your mother's name against you."

"I certainly hope you're right," Sandy sighed as he and Quiz said good night to the others and headed for their room.

"What a mess," his friend said. "Navajos squabbling with Utes, Hopis and the state of Utah. Crooks waiting to take advantage of them all. Pains like fingernails! Cavalry heroes who turn into villains. I suppose that's why the biggest oil field in the Four Corners is called the Paradox Basin!"

CHAPTER THREE

A "Poor Boy" Outfit

HALL ROUTED RALPH SALMON and the boys out of bed before dawn the next day. They ate a huge pancakes-and-sausage breakfast cooked by the sleepy-eyed but cheerfully clucking Misses Emery and climbed into the company jeep just as the sun was gilding the peaks of the mountains. Soon their teeth were chattering in the morning cold as Salmon roared off in a northwesterly direction toward the San Juan River lease.

"I wouldn't have come down to Farmington at all this week," Hall shouted above the wind which made the jeep top pop and crack, "except that I promised to pick up you boys, and Ralph had to get our core drill repaired. That's the drill you hear thumping under the seat. We're down a thousand feet with our second well and I should be riding herd on it every minute."

"You're a worrywart, boss," chuckled the Indian. "You know that Harry Donovan's on the

job up there. He can handle things just as well as you can."

"You're right," Hall answered. "But somehow it doesn't seem right to have a geologist bossing the drill crew. That's a hang-over from my days with a big spit-and-polish producing company, I guess.

"Ours is what they call a 'poor boy' outfit here in the oil country," he explained to Sandy and Quiz. "We make do with secondhand drill rigs and other equipment. Sometimes we dig our engines and cables out of junk yards."

"Now, now, boss, don't cry," said their driver. "It's not quite that bad."

"It will be if this well doesn't come in." Hall grinned. "But we do have to make every penny count, kids. We all pitch in on anything that needs doing. What kind of jobs have you cooked up for our new roustabouts, Ralph?"

"There's a new batch of mud to be mixed," the Indian answered. "How about that for a starter?"

"Mud!" Quiz exploded. "What's mud got to do with drilling an oil well?"

"Plenty, my friend. Plenty," Ralph answered. "Mud is forced down into a well to cool the drill bit and to wash rock cuttings to the surface. You use mud if you have water, that is. In parts of this country, water's so short, or so expensive to haul, that producers use compressed air for those pur-

poses. We're lucky. We can pipe plenty of water from the river."

"Then you mix the water with all sorts of fancy chemicals to make something that's called mud but really isn't," said Sandy, remembering tales of the oil country that his father had told him.

"You're forgetting that we're a 'poor boy' outfit," said Hall. "Chemicals cost money. We dig shale from the river bed and grind it up and use it for a mix. You'll both have a nice new set of blisters before this day is over."

They followed a good paved road to the little town of Shiprock, which got its name from a huge butte that looked amazingly like a ship under full sail. Crossing the San Juan over the new bridge that Pepper had pointed out the day before, they turned northwest onto a badly rutted trail. Here and there they saw flocks of sheep, watched by half-naked Indian children and their dogs. Occasionally they passed a six-sided Navajo house surrounded by a few plowed acres.

"Those huts are called hogans," Ralph explained, placing the accent on the last syllable. "Notice that they have no windows and that their only doors always face toward the rising sun. Never knock on a hogan door. That's considered bad luck. Just walk in when you go to visit a Navajo."

"Whe-e-ew!" Sandy panted when an hour had

passed and he had peeled out of his coat, shirt, and finally his undershirt. "How can it get so hot at this altitude?"

"Call this hot?" jeered Salmon. "Last time I was down in Phoenix it was 125 degrees in the shade, and raining cats and dogs at the same time. I had to park my car a block from the hotel, so I ran for it. But when I got into the lobby my clothes were absolutely dry. The rain evaporated as fast as it fell!"

"That," said Hall, "is what I'd call evaporating the truth just a leetle bit."

"Mr. Salmon . . ." Quiz hesitated. "Could I ask you a personal question?"

"You can if you call me Ralph," answered the tall driller as he slowed to let a Navajo woman drive a flock of goats across the trail. She was dressed in a brightly colored blouse and long Spanish skirt, as if she were going to a party instead of doing a chore, and she did not look up as they passed.

"Well, how is it you don't talk more—like an Indian?" Quiz asked.

"How do Indians talk?" A part of the Ute's smile faded and his black eyes narrowed ever so slightly.

"Why, I dunno—" the boy's face turned red with embarrassment—"like Chief Quail, I guess. I mean . . . I thought . . ."

"When you've served a hitch in the Navy, Quiz, you get to talking just like everyone else, whether you're an Indian or an Eskimo."

"Were you in Korea, Ralph?" Sandy asked to break the tension.

"I was not! I served my time working as a roustabout on oil wells in one of the Naval Reserves."

"And, since that wasn't enough punishment," Hall said as he grinned, "Ralph came home and took advantage of the GI bill to go to school in Texas and became a driller."

"Yep," Salmon agreed. "And I soon found out that an Indian oil driller is about as much in demand as a two-headed calf." He threaded the car through the narrow crevice between two tall buttes of red sandstone that stuck up out of the desert like gnarled fingers. "I was just about down to that fried caterpillar diet that Chief Quail keeps kidding me about when a certain man whose name I won't mention gave me my first job."

"And you turned out to be the best all-round oilman I ever hired," said Hall as he slapped the other on his bronzed, smoothly muscled back. "I figured that if Iroquois Indians make the finest steelworkers in the construction business, a Ute should know how to run a drill rig. I wasn't mistaken."

Salmon was at a loss for words for once. His ears turned pink and he concentrated on the road, which was becoming almost impassable, even for a jeep.

"That's my reservation over there across the Colorado line," he said at last, turning his head and pointing with outthrust lips toward the north and east.

"Nice country—for prairie dogs. Although the southern Utes are doing all right these days from royalties on the big oil field that's located just over that ridge. They tell me, too, that the reservation holds one of the biggest coal deposits in the western United States."

"Why didn't you stay on the reservation, then?" Quiz wanted to know.

"I like to move around. People ask me more questions that way."

"Oh." Quiz stopped his questioning.

"Up ahead and to the left," Ralph went on, "is the actual Four Corners, the only place in the country where the boundaries of four states meet. It also is the farthest point from a railroad in the whole United States—one hundred and eighty miles or so, I understand. How about stopping there for lunch, boss, as soon as we cross into Utah? Nice and quiet." He winked at Quiz to take any sting out of his earlier words.

After they had eaten every one of the Misses

Emery's chicken and ham sandwiches, Hall took over as their driver and guide.

"My lease is up near the village of Bluff, on the north side of the river," he explained. "I'm convinced, though, that most of the oil and uranium is in Navajo and Hopi territory south of the San Juan. I've had Donovan down there running seismographic surveys and he says the place is rich as Croesus. That's why I've been talking turkey to Chief Quail—trying to get him to get the Navajo and Hopi councils together so we can develop the area."

"Is Quail chief of all the Navajos?" Sandy asked. "He didn't seem to be exactly . . ." He stammered to a stop while Ralph chuckled.

"Oh, no," Hall answered. "Quail is just a chief of one of the many Navajo clans, or families. The real power is held by the tribal council, of which Paul Jones is chairman. But Chief Quail swings a lot of weight on the reservation."

"Hah!" Ralph snorted. "Chief Quail's a stuffed shirt. They made a uranium strike on his farm last year, so what does he do? . . . Buys himself a new pickup truck! I'd have celebrated by getting a Jaguar."

"A Jaguar is like a British Buick," said Quiz, suddenly coming into his element as the talk got around to cars. "A Bentley would have been better."

"I know, I know," Ralph answered. "Or a Rolls Royce if he could afford a chauffeur. I read the ads too."

They followed the river, now deep in its gorge and getting considerably wider, for another twenty miles. They were out of the reservation now and passed a number of prosperous farms. The road remained awful, however, being a long string of potholes filled to the brim with yellow dust. The holes couldn't be seen until the jeep was right on top of them. Hall had to keep slamming on his brakes at the risk of dislocating his passengers' necks.

"You should travel through this country when it rains," he said cheerfully. "Cars sink into the mud until all you can see is the tips of their radio antennas."

"We'd get to the well before sunset if you drove as well as you tell tall stories," Ralph commented dryly.

They finally made the field headquarters of the Four Corners Drilling Company with two hours of sunlight to spare. The boys looked at the place in disappointment. An unpainted sheet-iron shack with a sign reading OFFICE over its only door squatted close to the top of the San Juan gorge. Not far from it was an odd-looking contraption of pipes, valves and dials about as big as a home furnace. There was no sign of a well derrick as

far as they could see across deserted stretches of sand, sagebrush, and rust-colored rock.

"There she is—Hall Number One," said their employer. He walked over to the contraption, patted it as though it was his best friend, and stood, thumbs hooked in the armholes of his worn vest, while he studied the dials proudly. "This is my discovery well. It's what buys the baby new shoes."

"But where are the derricks and everything?" Quiz tried unsuccessfully to keep the disappointment out of his voice.

"Shhh!" whispered Sandy. "They've skidded the derrick to the new well site. This thing's called a Christmas tree. It controls the flow of oil out of the ground."

"Smart boy," said Hall. "We've got our wildcat hogtied and hooked into this gathering line." He pointed to a small pipe that snaked southward across the desert. "The gathering line connects with the big new pipeline to the West Coast that passes a few miles from here. Number One is flowing a sweet eight hundred and fifty barrels a day."

"But I don't see any other well," Quiz persisted.

"It's over behind that butte." Hall pointed again. "Oh, I know what's bothering you. You're remembering those old pictures that show derricks in an oil field standing shoulder to shoulder,

like soldiers. We don't do things that way any longer. We've got plenty of room out here, so we space our wells. Only drill enough of them to bring up the oil without waste. Come on. I'll take you over and introduce you to the gang."

A short ride brought them to a scene of whirlwind activity. Drilling had stopped temporarily on Hall's second well so that a worn bit could be pulled out of the hole and replaced with a sharp one. But that didn't mean work had stopped!

The boys watched, spellbound, while dripping lengths of pipe were snaked out of the ground by a cable which ran through a block at the top of the tall derrick and was connected to a powerful diesel engine. As every three lengths arrived at the surface, two brawny men wielding big iron tongs leaped forward and disconnected them from the pipe remaining in the well. Then the 90-foot "stand" was gently maneuvered, with the help of another man, wearing a safety belt, who stood on a platform high up on the derrick. When a stand had been neatly propped out of the way, the next one was ready to be pulled out of the well.

The crew worked at top speed without saying a word until the mud-covered drill finally came in sight. They unscrewed the bit from the end of the last stand of pipe, and replaced it with a sharp one. Then the process was reversed. Stand after stand of pipe was reconnected and lowered

until all were back in the well. Then the engine began to roar steadily. A huge turntable under the derrick started spinning the pipe at high speed. Down at the bottom of the hole the bit resumed chewing into the rock.

"Nice teamwork, Ralph," said Hall. "You certainly have trained as good a crew as can be found in the Regions."

"Nice team to work *with*," answered the driller as he looked proudly at his men, who were about equally divided between Indians and whites. "Now let's see if there's any work for our two tenderfeet before it's time to knock off for supper. Come on, fellows. The mud pit is slurping for you."

Two hours later, when the cook began hammering on his iron triangle, Sandy and Quiz looked like mud puppies.

"You're a howling fright," said the tall boy as he climbed out of the big pit where a new batch of goo was swirling and settling. He plastered down his unruly cowlick with a slimy hand. For once the hair stayed in place.

"And you look like a dirty little green man from the swamps of the planet Venus." Quiz spat out a bit of mud and roared with laughter. "Lucky thing we don't have to get this muck off with compressed air. Come on. I'll race you to the showers."

Dinner was eaten in the same dogged quiet that they had noted at the motel. It was a good dinner, too, although it came mostly out of cans.

The boys were introduced all around after the apple pie had been consumed to the last crumb, but they were too tired and sleepy to sort out names and faces. They did gather that four-man shifts—or "towers," as they seemed to be called —kept the drill turning day and night until the drill struck oil or the well had to be abandoned as a "duster."

The only person present who made a real impression was Harry Donovan, Hall's geologist. He was an intense, bald, wiry fellow in his thirties who kept biting his lips, as though he was just about to impart a deep secret. But all he seemed to talk about were mysterious things like electronic log readings, core analyses, and the distance still to be drilled before something called the "Gallup Pay" would be reached.

Hall and Salmon were intensely interested in Donovan's report. Try as they would to follow it, Sandy and Quiz soon found themselves nodding. Finally they leaned their elbows on the oilcloth-covered dinner table and snored gently.

Ralph shook them partially awake and showed them their beds in a battered trailer. They slept like logs despite the fact that, bathed in brilliant

white light provided by a portable electric generator, the rig roared and clanked steadily throughout the night as its bit "made hole" more than a thousand feet underground.

CHAPTER FOUR

Learning the Ropes

SANDY AND QUIZ spent the next two weeks picking up a working knowledge of drilling, getting acquainted with Hall's outfit, and learning to keep out from under the feet of the crew. Ralph saw to it that their jobs varied from day to day as they grew lean and brown under the desert sun.

"Used to have a lot of trouble keeping fellows on the job out here next to nowhere," he explained with a grin. "The boys would get fed up after a few weeks. Then they'd quit, head for town, and I'd have to spend valuable time rounding up replacements. Now I switch their work around so they don't have so much chance to become bored. Let's see . . . you mixed mud yesterday, didn't you? Well, today I want you to help Jack Boyd keep his diesel running." Whereupon the boys would spend a "tower" cleaning the engine room, or oiling and polishing the powerful but over-age motor that Boyd nursed

like a sick child to make it keep the bit turning steadily.

On other days they were assigned to drive to Shiprock or Farmington for supplies, to help Ching Chao in the cookhouse, or to learn the abc's of oil geology from Donovan. Sandy preferred to do chores around the derrick and was very proud when he finally was allowed to handle one of the huge tongs used to grip the stands of pipe so that they could be removed from the well or returned to it.

Quiz, on the other hand, never tired of studying the wavering lines marked on strips of paper by the electric log that Donovan lowered into the well at regular intervals. He soon got so that he could identify the different kinds of rock layers through which the bit was drilling, by the slight changes in the shapes of those lines. Or he would train a microscope on thin slices of sandstone sawed from the yard-long cores that were hauled out of the well from time to time. With his usual curiosity, he had read up enough about geology to recognize the different marine fossils that the cores contained. He would become as excited as Donovan did when the geologist pointed to a group of minute shells in a slice of core and whispered, "Those are Foraminifera, boys! We must be getting close to the oil." And he would become as discouraged as his teacher when care-

ful study of another core showed no indication of ancient sea creatures.

"I don't get it," Sandy would mutter on such occasions. "How come those shells got thousands of feet underground in the first place? And what have they got to do with finding oil?"

Then the geologist would mop his bald head with a bandanna handkerchief, take off his thick horn-rimmed glasses and use them as a pointer while he lectured the boys on his beloved science.

"All of this country has been deep under water several times during the last few million years," he would explain patiently. "In fact, most of the center of the North American continent has been submerged at one time or another. When the Four Corners region was a sea bottom back in the Carboniferous era, untold generations of marine plants and animals died in the water and sank to the bottom.

"As the ages passed, those life forms were buried by mud and silt brought down from surrounding mountains by the raging rivers of those days. The weight of the silt caused it to turn into sandstone or limestone layers hundreds of feet thick. This pressure generated a great deal of heat. Geologists think that pressure and heat compressed the dead marine creatures into particles of oil and gas.

"Every time the land rose to the surface and

sank again, another layer or stratum of dead fish and plants would form. All this heaving and twisting of the earth formed traps or domes, called anticlines, into which the oil and gas moved. That's why we find oil today at different depths beneath the surface."

"I understand that water and gas pressure keeps pushing oil toward the surface," Sandy said on one occasion, "but then why doesn't it escape?"

"Usually it gets caught under anticlines where the rock is too thick and hard for it to move any farther," Quiz cut in, eager to show off his new knowledge of geology. "But it does escape in some places, Sandy. You've heard of oil springs. George Washington owned one of them. And the Indians used to sop crude petroleum from such springs with their blankets and use it as a medicine or to waterproof their canoes. Sometimes the springs catch fire. Some of those still exist in parts of Iran. I read an article once which said that Jason really was looking for a cargo of oil when he sailed the *Argo* to the Caucasus Mountains in search of the Golden Fleece. The fleece was just a flowery Greek term for a burning spring, maybe."

"Maybe," Donovan agreed as he stoked his pipe and sent clouds of smoke billowing through the laboratory. "There's also a theory that Job was an oilman. The Bible has him saying that 'the rock poured me forth rivers of oil,' you re-

member. If you read the Book of Job carefully, it almost sounds as if the poor fellow's troubles started when his oil field caught fire. However that may be, we know that the Greeks of Jason's time used quite a bit of oil. The Arabs even refined petroleum and lighted the streets of their cities with something resembling kerosene almost a thousand years ago."

"Golly," said Sandy. "It's all too deep for me —several thousand feet too deep. I think I'll go help Chao get dinner ready! I *do* know how to cook."

The one job around the derrick that the boys never got a chance to handle was that of Peter Sanchez, the platform man who worked on their shift, or "tower." Whenever the time came to replace a bit, Peter would climb to his perch halfway up the rig, snap on a safety belt, and guide the upper ends of the ninety-foot stands of pipe into their rack. There they would stand upright in a slimy black bunch until it was time to return them to the well.

Peter, who boasted that he had been an oilman for a quarter of a century, worked effortlessly. He never lost his footing on the narrow platform, even when the strongest wind blew. Platform men on the other shifts were equally sure-footed—

and very proud of their ability to "walk" strings of pipe weighing several tons. And they took things easy whenever they climbed down from their dizzy perches.

Peter, in particular, was fond of amusing the other crew members by telling them stories about the oil fields in the "good old days." His favorite character was a driller named Gib Morgan. Gib, he said, had come down originally from the Pennsylvania regions when the first big strikes were being made in Texas and Oklahoma, around 1900.

"You never heard of Gib?" Peter said one night as the off-duty crews were sitting around a roaring campfire after dinner. "Well, I'll tell you . . ." He rolled a cigarette with one hand, cowboy fashion, while studying the young greenhorns out of the corner of his eye. "Gib was a little feller with a big mustache but he could put Davy Crockett and Paul Bunyan in the shade when he had a mind to. When he first came to Texas he had a run of bad luck. Drilled almost a hundred dry holes without hitting a single gusher. Got down to his last silver dollar. Then do you know what he did to make a stake?"

"No. What?" Quiz leaned forward eagerly.

"He pulled up all those dusters, sawed 'em into four-foot lengths, and sold 'em to the ranchers for

postholes. That's how it happens that all the Texas ranges got fenced in with barbed wire, son."

When the laughter had died down and Quiz's ears had returned to their normal color, the platform man went on: "That wasn't the only time that Gib helped out his fellow man. Back around 1900, just before the big Spindletop gusher came in, oilmen in these parts were having a lot of trouble with whickles—you know what a whickle is, don't you, Sandy?"

"It's a cross between a canary bird and a bumblebee, isn't it?" Sandy was dimly remembering a story that his father had told him.

"Well! Well!" Peter looked at him with more respect. "That's exactly right. Pretty little varmints, whickles, but they developed a powerful taste for crude oil. Soon as a well came in, they'd smell it from miles away. That's no great feat, I'll admit, for crude oil sure has a strong odor. Anyway, they'd descend on the well in swarms so thick that they'd darken the sky. And they'd suck it plumb dry before you could say Jack Robinson, unless you capped it quick.

"Well, Gib got one of his big ideas. He went out to one of his dusters that he hadn't pulled up yet, poured several barrels of oil down it, and 'salted' the ground with more oil. Pretty soon, here came the whickles. They lapped up all the

oil on the ground. Then a big whickle, probably the boss, rose up in the air and let out a lot of whickle talk about how he personally had discovered the biggest oil highball on earth. After that he dived into the well, and all the others followed him, like the animals that went into the ark. Soon as the last one was down the hole, Gib grabbed a big wooden plug and capped the well. We haven't had any whickle trouble since."

"Then all the poor whickles died?" Quiz rose to the bait.

"Oh, no," Peter answered with a straight face. "They're still buzzing around in that hole, mad as hops. Some day a greenhorn like you will come along and let 'em out."

"Wonder what ever became of Gib," said Donovan, between puffs on his pipe.

"Last I heard he was up Alaska way," Ralph said. "Here's a story about him that you may want to add to your repertoire, Pete. Gib was drilling near Moose Jaw in December when it got so cold the mercury in the thermometer on the derrick started shivering and shaking so hard that it knocked a hole right through the bottom of the tube. During January it got colder yet and the joints on the drill pipe froze so they couldn't be unscrewed.

"Now Gib had a bet he could finish that well in four months and he wasn't going to let Jack

Frost faze him. He just rigged up a pile driver that drove that frozen pipe on down into the ground as pretty as you please. Soon as one stand of pipe was down, the crew would weld on another and keep driving. Course the pipe got compressed a lot from all that hammering, but Gib couldn't see any harm in that.

"Time February came around it got real chilly —a hundred or so below zero. He was using a steam engine by that time because the diesel fuel was frozen solid, but no sooner would the smoke from the fire box come out of the chimney than it would freeze and fall back on the snow. Wading through that black stuff was like pushing through cotton wool, and besides, the men tracked it all over the clean bunkhouse floor. So Gib had to get out a bulldozer and shove it into one corner of the clearing where he had his rig set up.

"They were down about four miles on March 15 when an early spring thaw set in. First thing that happened was that the smoke melted and spread all over the place. Couldn't see your nose on your face. Fire wardens came from miles around thinking the forest was ablaze. Gib was in a tight spot so he did something he had never done before—he looked up his hated rival, Bill McGee, who was in the Yukon selling some refrigerators to the Eskimos. He had to give skinflint McGee a half interest in the well to get him

to help out. McGee just borrowed those refrigerators, stuffed the smoke into them, and refroze it.

"No sooner was the smoke under control than all that compressed drill pipe down the well started to thaw out. It began shooting out of the hole like a released coil spring. First it humped up under the derrick and pushed it a hundred feet into the air. Then it toppled over and squirmed about the clearing like a boa constrictor.

"That was where Bill McGee made his big mistake. Gib had told him the drill bit, which had been dragged out of the well by the thrashing pipe, had cuttings on it which showed there was good oil sand only a few feet farther down. But Bill figured that with the derrick a wreck, the well was a frost. So he sold his half interest back to Gib, who didn't object, for a plug of good chewing tobacco.

"Soon as McGee was out of sight, Gib headed for the nearest U.S. Assay Office. He got the clerk to lend him about a quart of the mercury that assay men use to test the purity of gold nuggets.

"Morgan went back to camp, sat down beside the derrick, lit his pipe and waited for the freeze-up which he knew was bound to come before spring actually set in. It came all right! Puffing his pipe to keep warm Gib watched the new alcohol thermometer he had bought in town go down, down, and down until it hit a hundred

and ten below. Right then he dropped his quart of solidified mercury into the well.

"Just as he figured, it acted the way the mercury in the old thermometer had done—went right to the bottom and banged and banged trying to escape from that awful cold. Yes, sir, that hunk of mercury smashed right through to the oil sand. Pretty soon there was a rumble and a roar. Up came a thick black column of oil."

"Wait a minute," cried Sandy, thinking he had caught the storyteller out on a limb. "Why didn't the oil freeze too?"

"It did, Sandy. It did," Ralph answered blandly. "Soon as it hit the air, it froze solid. But it was slippery enough so it kept sliding out of the ground a foot at a time. Gib got his men together and, until spring really came, they kept busy sawing hunks off that gusher and shipping them out to the States on flatcars!"

"You win, Ralph," sighed the platform man as he heaved himself to his feet. "I can't even attempt to top that tall one, so I guess I'd better go to bed. Your story should keep us cool out here for at least a week."

After that mild hazing session, Sandy and Quiz found themselves accepted as full-fledged members of the gang. The crew members, who had kept their distance up to that point, now treated them

like equals. Each boy soon was doing a man's work around the rig and glorying in his hardening muscles.

As the end of June approached, Hall, Donovan and Salmon got ready for their monthly trip to Window Rock, Arizona, to submit bids for several leases in the Navajo reservation.

"There's room in the jeep, so you might as well go along and learn something more about the oil business," Hall told the boys. "I'm pretty sure our bids won't be accepted, but the only thing we can do is try."

At that point trouble descended on the camp in the form of a Bonanza bearing Red Cavanaugh and Pepper March.

The husky electronics man clambered out of his machine and came forward at a lope. He was dressed only in shorts, and the thick red hair on his brawny chest glinted in the sunlight. Pepper trotted behind him like an adoring puppy.

"Howdy, Mr. Hall. Howdy, Donovan," Cavanaugh boomed as he reached the rig. "Heard you'd been exploring down in the Hopi butte section. Thought I'd bounce over and sell you some equipment that has seismographs, magnetometers and gravimeters beat three ways from Sunday. The very latest thing. You can't get along without it."

"Can't I?" said Donovan mildly.

"Of course you can't!" Cavanaugh clapped the little man on the back so hard that he almost dislodged Donovan's glasses. "This is terrific! The biggest thing that's happened to me since I ran those three touchdowns for State back in 1930. I developed it in my own lab. You know how a Geiger counter works . . . ?"

"Well, faintly," answered the geologist, who had three of them in his own laboratory. "I wasn't born yesterday, *Mr.* Cavanaugh."

"Well, don't get sore, *Mr.* Donovan." Cavanaugh bellowed with laughter. "All I wanted to say was that my new device uses scintillation counters, which are—"

"—a thousand times more sensitive to atomic radiation than Geiger counters," Donovan interrupted. "And you're going on to tell me that you can take your doodlebug up in an airplane and spot a radiation halo surrounding any oil deposit. Right? I read the trade papers, too, you know. May I ask you a question?"

"Why, of course." Cavanaugh's chest and neck had begun to sweat.

"Do you have a Ph.D. degree in electronic engineering?"

"Why, uh, naturally."

"Well, I don't, unfortunately, Mr. Cavanaugh. But I know enough about the science to understand that the gadget you are selling isn't worth a

plugged nickel unless it's operated by an expert, and unless it's used in connection with other methods of exploration. I have told you several times at Farmington that this outfit can't afford another scientist at present, so I wish you would please go away."

"Now, Mr. Hall—" Cavanaugh turned to the grinning oilman—"can't you make your man listen to reason?"

"He's not my man. He's my partner," Hall answered mildly. "What he says goes. Now, if you and your, ah, man will have a bite of lunch with us, I'd be mighty pleased, providing you stop this high-pressure salesmanship."

"Well . . ." Cavanaugh seemed on the verge of an explosion. "Well, thanks for your invitation, but Mr. March and I are due up at Cortez in half an hour. We're delivering several of my gadgets, as you call them, to smart oilmen. Come on, Pepper."

"John," said Donovan after they had watched Cavanaugh's plane roar away, "I think I'll have to sock that big lug the next time I meet him."

"He'd make mincemeat of you," Mr. Hall warned.

"I doubt it. He's soft as mush. Anyway, I don't like him and I'll have nothing to do with the equipment he peddles. He knows that, so I think the real reason he came here was to spy on us—to

find out whether our well had come in yet."

"Oh, he's not that bad," Hall objected. "Boys, you know something about him. What's his reputation in Valley View?"

"He acts rich," Sandy answered after a moment of deep thought.

"The people who work in his lab say he's not as smart as he makes out," Quiz added. "I agree with Mr. Donovan. There's something phony about him. I've a hunch it's connected with those three touchdowns he's always bragging about. If I could only remember. . . . Some day I will, I bet."

"Well, let's all simmer down and forget him," said Hall. "It's time for lunch."

CHAPTER FIVE

A Light in the Window Rock

THE MORNING AFTER Cavanaugh's unwelcome visit, Hall, Donovan, Salmon and the boys set out on their 150-mile drive south to the town of Window Rock. The jeep wallowed and bounced as usual over the dusty trail to Shiprock. There Ralph turned right onto US 666, pushed the accelerator toward the floor board and relaxed.

"We don't have a Bonanza, boss," he said, "but a loaded jeep on a good paved road is the next best thing."

"I'd prefer a helicopter, equipped with a supercharger that could lift it over the ranges," Hall answered. "Maybe, if Number Two comes in, we can buy a whirlybird, along with a portable drill rig truck."

"A portable rig sure would come in handy for drilling test wells," Ralph agreed. "Maybe we could make it come true by putting an offering on that Navajo wishing pile." He nodded toward

a mound of small brightly colored stones that stood where an Indian trail crossed the highway.

"Nuh uh," the oilman said sharply. "And don't *you* ever try that stunt, boys. The Navajos don't want white men thinning out their luck by putting things on their wishing piles. By the same token, never take any object from the piles that you will see scattered through the reservation. If you're caught doing that, you'll be in for real trouble."

"Yep. The braves will get mad as wet hens," Salmon said, chuckling.

"Ralph," said Quiz, "why do you poke fun at the Navajos?"

"Well, pardner, did you ever hear a UCLA man say anything good about the Stanford football team?"

"Oh, but that's different. It's just school rivalry," Sandy objected as he crossed his long legs the other way in an effort to keep his knees from banging against the dash.

"Well, you might say that the Navajos and Utes have been traditional rivals since the beginning of time. Nothing very serious, you understand. We've raided each other's cattle, and taken a few scalps now and then, when a Navajo stepped on a Ute's shadow, or vice versa. The Navajos are Athapascans, you see. They're related to the Apaches, and think they're the lords of creation. But Utes are Shoshoneans. We belong to one of

the biggest Indian 'families' in North America. The state of Utah is named in our honor and there are Shoshones living as far north as Alaska. Maybe you've heard of Sacagawea, the Shoshone 'Bird Woman,' who guided the Lewis and Clark Expedition all the way to the Pacific Coast.

"The Hopis are our brothers, and the Piutes are our poor relations. The Piutes *did* eat fried caterpillars and roots in the old days, I guess, but that was only because they lived out in the western Utah desert where there wasn't much else to eat. We southern Utes lived mostly on buffalo meat. We were great hunters. Our braves would creep right into the middle of a herd of buffalo and kill as many as they wanted with their long knives, without causing the animals to take fright and stampede."

"How could they do that?" Sandy asked.

"When they went on a hunt, they dressed in buffalo hides, and made themselves smell like, walk like and even think like buffalo. The animals didn't believe they were men."

"Can you still do that—think like a buffalo, I mean?" Quiz gasped.

"Oh, sure. Just find me a herd of wild ones and I'll prove it."

"Ralph's talents sure are being wasted on drilling for oil," Donovan said, knocking out his pipe against the jeep's side for emphasis.

"All very amusing," Hall grunted. "But crooked white men have taken advantage of your sporting rivalry with the Navajo to rob both of you blind during the past century. The same thing will happen again, I warn you, if you don't stop playing Indian and begin working at it."

"Yes, boss," Ralph agreed shamefacedly. "You're absolutely right. But—I forget everything you've said when that Quail character starts getting under my buffalo hide!"

The car whined merrily down the road past the little towns of Newcomb and Tohatchi while Ralph sulked and Hall and Donovan talked shop which the boys couldn't understand. They turned left on Route 68 in the middle of the hot afternoon, crossed the line from New Mexico into Arizona, and a few minutes later pulled into Window Rock.

The town, made up mostly of low, well-kept adobe and stone buildings, lay in a little valley almost surrounded by red sandstone cliffs. It had received its name, obviously, from one huge cliff that had a round hole in it big enough to fly a plane through. One of its largest buildings was occupied by the Indian Service. Another, built like a gigantic hogan, was the Navajo Tribal Council, Hall told the boys. They passed a brand-new hospital and a school and pulled up at a motel

where a large number of Cadillacs and less imposing vehicles were parked.

"Looks as if everybody in the Southwest had come to bid on or sell equipment," said Mr. Hall as he studied the array of cars and trucks. Some of the latter bore the names of well-known companies such as Gulf, Continental, Skelly and Schlumberger. Others belonged to smaller oil and uranium firms that Sandy had never heard of.

"Donovan, Ralph, and I had better go in and chew the rag with them awhile," the oilman continued. " Why don't you fellows look the town over until it's time for dinner? You'd just get bored sitting around."

The boys were drifting over toward the Council Hall for a better look at the many Navajos in stiff black hats and colorful shirts who clustered around its doorway when they heard a familiar shout.

"Wait up!" Pepper March dashed across the dusty street and pounded them on their backs as if they were his best friends. "Gee, it's good to see a white man you know."

"You saw us only yesterday," Sandy pointed out rather coldly.

"Oh, but that was business. Come on. I'll buy a Coke. What have you been up to? How do you like working for an old crank? What's biting Hall's

geologist? Boy, isn't it hot? Did you know that I'm learning to fly Red's Bonanza? How's your well coming along?"

"Whoa!" cried Quiz. "Relax! We've been working like sin. We like Mr. Hall. His geologist is going to bite your Mr. Cavanaugh pretty soon, I'm thinking. It is exactly 110 degrees in the shade. We did not know you were learning to fly a plane. And the situation at the well is strictly our own affair."

"Uh—" said Pepper, "you're not sore about what happened yesterday, are you? Red was only trying to make a sale."

"Nope. We're not sore," Sandy answered. "But we're beginning to take a dim view of your boss."

"Why, Red's the grandest guy you ever met. Do you know what he's got me doing?"

"There you go again, asking personal questions," said Quiz.

"I'm helping him set up a string of light beam transceivers that will keep his camps here and at Shiprock in constant communication with his agent down at Gallup."

"What on earth for?" Sandy almost choked on his Coke in amazement. "What's the matter with the telephone, telegraph and short-wave radio stations that are scattered all over this territory? And how come Cavanaugh has to have a perma-

nent camp at Window Rock, and an agent in Gallup?"

"Now who's asking the questions?" Pepper said smugly. "Have another Coke?"

"No, but we'll buy you one," Quiz replied, and added with a wink at his pal, "It must be quite a job, setting up one of your stations."

"Sure is!" The blond boy expanded at this implied praise. "It's never been done before over such long distances, Red says. You have to focus the beam perfectly, or it's no good. But, after you do that, nobody can eavesdrop on you unless . . ." He stopped short, and jumped off the diner stool as though it had suddenly become hot. "Well, so long, fellows. I've got to be getting back to camp. See you around." And he departed as abruptly as he had come.

"Now what kind of business was that?" Sandy asked as he paid the entire bill.

"Monkey business, I guess," Quiz answered. "I think Mr. Hall ought to know about those stations, and maybe Mr. White, the Indian Agent, should be told too." He kicked at the dust thoughtfully as they walked slowly down Window Rock's main street.

"Hmmm. You have to get a license from the government to operate a short-wave station," said Sandy. "But I don't suppose you need one yet

for a light-beam job. Now, just supposing that Cavanaugh wanted to—"

"Wanted to what?"

"That's what I don't know. But I sure would like to find out. Let's be getting back to the motel."

They found themselves in the middle of a tense scene when they entered the motel patio. Twenty or thirty oil and uranium men were gathered there, their chairs propped comfortably against the adobe walls, while they listened to Cavanaugh and Donovan argue the merits of the big man's electronic explorer.

"You all know, my friends, that uranium ore can be, and has been, found with a one-tube Geiger," Red was booming. "But that's like throwing a lucky pass in a football game. To win the game, you need power in the line—power that will let your ball carrier cross the line again, and again, and again, the way I became an All-American by scoring those three touchdowns against California back in 1930."

"Oh, no!" Quiz whispered as he and Sandy founds seats in a far corner. "This is where we came in last time."

"In searching for oil, or even for uranium under a heavy overburden of rock," Cavanaugh went on, "you need at least the simplest scintillation counter because it is sixty times as sensitive

as a one-tube Geiger. Better yet is the really professional counter—as much as 600 times more sensitive than the best Geiger built. Best of all is my multiple scintillator—100 times more sensitive than the best single tube. Even you won't disagree with that, will you, *Mr.* Donovan?"

"Not at all," answered the bald man after several furious puffs on his pipe. "I only say that, in addition to the best possible electronic instrument, you need an operator who thoroughly understands radiation equipment. Also, you should have a crew of geologists and geophysicists who know how to balance radiation findings against those established by other methods."

"Nonsense," shouted the ex-football player. "Many of my customers have located oil-containing faults and stratigraphic traps with my detector where all other instruments had failed. You're just old-fashioned."

"Maybe I am," said Donovan, "and then maybe I just don't like to have wool pulled over my eyes, or the eyes of men I consider to be my friends."

"I'm not pulling wool. Halos or circles of radiation can be detected on the surface of the earth around the edges of every oil deposit. That's a proven fact." Cavanaugh pounded on the arm of his chair with a fist as big as a ham.

"Is it?" Donovan asked gently. "Jakosky, who is an authority on exploration geophysics, says,

and I quote his exact words: 'Atomic exploration is still in its infancy.' Let me tell you a story:

"Back in the early days of the oil business, a number of people made fortunes by charging big fees to locate petroleum deposits with the help of split willow wands. They'd walk around with the split ends of the wands between their hands until, they said, some mysterious force pulled the big end downward until it pointed to oil. A man who helped Colonel Drake promote his original oil well at Titusville, Pennsylvania, back in 1859, actually located several profitable fields with the 'help' of a spiritualist medium."

"He could hardly have failed," one of the onlookers spoke up. "In those days, oil was literally bursting out of the ground along many Pennsylvania creek beds."

"That's right, Tom," Donovan agreed. "Oil was everywhere, so those dowsers, or 'creekologists' as they often were called, did very well until the search for oil moved west where deposits were scarcer and much deeper underground.

"Around 1913, geologists had to be called in to do the exploration. They've been responsible for finding practically all the fields discovered since then. But the creekologists didn't give up easily. They built pseudo-scientific gadgets called doodlebugs and equipped them with lots of fancy dials and flashing lights. One doodlebug even had a

phonograph in it. As it was carried across a field, a ghostly voice would be heard saying, 'Your sainted Aunt Minnie bids me tell you to drill right here and you will bring in a second Spindletop.' "

"You can't call me a crook!" Cavanaugh, his face scarlet with rage, lunged to his feet and advanced on his tormentor.

"I'm not calling you a crook—yet." Donovan stood up too, knocked out his pipe and put it into his pants pocket. "If you would just stop making all of those wild-eyed claims for your detector, though, you would make out better out here."

As Cavanaugh continued to advance he added mildly, "I suppose I ought to warn you that I studied judo when I was in college."

"Excuse me for interrupting your fun, gentlemen," a quiet voice broke in. "Is there anyone here named Quincy Taylor? An urgent telegram for him was just relayed down from Farmington." Kenneth White, the Indian Agent, stood in the motel doorway holding a yellow envelope.

Nobody answered for a moment, but Cavanaugh took the opportunity to stomp out of the room while Donovan sat down quietly and started stoking his pipe.

"Hey, Quiz!" Sandy exploded at last. "Don't you recognize your own name? It's for you!"

His friend blushed with embarrassment as he

accepted the wire, but his round face turned pale as he read it.

"Mr. Hall," he choked at last. "It's from Dad. He slipped and broke his leg in two places. I'm to come home immediately and run the restaurant while he's laid up. Gee whiz!" He bit his lips to keep back the tears.

"That's tough, Quiz." The oilman came over and slipped a fatherly arm around the boy's shoulders. "Your father will be all right soon, I'm sure, but we certainly will miss you up at the well. Now the problem is to get you back to Farmington quick so you can catch the midnight bus. I'll send your things on, soon as we get back."

"One of my trucks is returning to Farmington after supper," spoke up the oilman named Tom. "You can go in that."

"Thanks," gulped Quiz.

The ban about talking at mealtime was broken that night. All the oil and uranium men were agreed that Cavanaugh was a bad-mannered blusterer, but they differed sharply about the value of his electronic detector.

"He has made several good uranium strikes with the thing," a bearded prospector insisted, "though what good they're going to do him I can't imagine, with the government not buying except from established mills. But don't sell Red

Cavanaugh short. He has made millions out of electronics, they say. He knows electronics. He's a smart operator. You keep an eye on the bids he makes tomorrow and you'll see what I mean."

"Well, I'm not throwing my seismograph away for a while yet," Tom retorted. "I'll put my money on Don's opinion any day."

The boys tried to follow the conversation, but Quiz's heart was not in it, and he only picked at his food. Finally he excused himself and headed for the dining-room door with Sandy after him.

"It's a tough break," he said half an hour later while he and his pal stood at the edge of town and stared upward at that amazing natural bridge called the Window Rock.

"It sure is," Sandy agreed glumly. "Maybe you can come back, though."

"Not a chance. Dad will be laid up most of the summer, and he can't afford to hire a manager, the way things are. There's nothing I can— Hey! Look!" He grabbed Sandy's arm and pointed. "See that point of light twinkling 'way up on top of the Window Rock? That isn't a star, is it?"

"Nuh-uh!" Sandy watched the faint flicker a thousand feet above them. "That must be where Cavanaugh has pitched his camp. He's sending a message of some kind over light beam. If it were a heliograph transmitting in Morse code I could

read it. But that's a modulated beam. . . . Say, we'd better be moseying back to the motel. Must be about time for your truck to leave."

"Sandy," Quiz said half an hour later after they had shaken hands solemnly, "I'm going to do everything I can, when I get home, to do some detective work on Cavanaugh. If anything turns up, I'll let you know quick."

"Do that, Quiz." Sandy swallowed and his voice broke. "Be seeing you."

Quiz climbed slowly into the cab of the big tool truck. As it roared off into the starlit desert night he kept waving a forlorn farewell.

CHAPTER SIX

Cliff Dweller Country

SANDY HAD EXPECTED that the opening of bids for leases on thousands of acres in the Navajo reservation would be an exciting occasion, something like a country auction. Instead, he found it a great bore.

Scores of bidders in their shirt sleeves lounged on hard straight-backed chairs in the stuffy meeting room of the Indian Service building, or chatted, smoked and told jokes in the corridors. Kenneth White and other representatives of the Indian Service sat behind a long redwood table, opened piles of envelopes, compared bids, held long whispered conferences with grave, leather-faced members of the Navajo Council and their advisers, and very occasionally handed down decisions.

"The bid of $3,900 per acre made for 200 Navajo acres in San Juan County, northeast, southeast of Section 27-24 N-8 is accepted," White

then would drone. Or: "A bid of $318 per acre for 125 acres of Section 18, 42 north, 30 east is rejected by the Council because it's too low. Another bid may be made at the August meeting, if desired."

After an hour of this, Sandy was counting the cracks in the floor, watching flies buzzing against the windowpanes, and wondering whether he dared ask Mr. Hall to be excused. He hesitated about doing this because the oilman was following the bidding with tense interest and making endless notes on the backs of old envelopes that he kept dragging out of his vest pockets.

"Ssst!" Ralph whispered from the seat behind him. "This is murder. How about having a second breakfast with me?

"We never should have come down here this month when our well needs watching every minute," the young Indian added after they had entered a nearly empty diner and ordered ham and eggs which neither of them really wanted. "The big companies have the big money, so they'll gobble up the best of the acreage, as usual. We poor boys will get some small tracts, if we're lucky. And I don't think John Hall's outfit is going to be lucky today."

"Why is that?" Sandy asked.

"Because most of our bids are for land that's

under dispute between the Navajos and Hopis. They can't be accepted until some sort of settlement is reached between the tribes. I don't know why John keeps putting them in. Well—" Ralph finished his coffee and slid off the stool and onto his feet in one motion, like a big cat—"let's go back and learn the worst."

There was a strange tenseness in the meeting room when they entered. Cavanaugh and White were standing facing each other across the table. All eyes were riveted on them and not a sound was being made by the onlookers.

"Mr. Cavanaugh," the Indian Agent was saying, "neither the Service nor the Council can understand the meaning of the bids you have submitted. Some of them are for small tracts around the Pinta Dome area in Apache country where there has never been the slightest show of uranium-bearing ore. I don't want to tell you your business, but . . ."

"Thank you for that, Mr. White," the red-haired giant growled. "Let the bids stand."

"Very well. They are accepted. But this other bid—for a thousand acres in the bed of the San Juan River. You must have made an error. It is submitted directly to the United States government, instead of to the Navajo Council. Do you wish to correct it?"

"I do not," snapped Cavanaugh.

"But it cannot be accepted, since the stream is not navigable."

"I challenge that statement, Mr. White. Under the law it cannot be rejected until the stream is *proved* not to be navigable. If you won't accept it, let it stand as a prior claim. Is there anything else?"

"Nothing else whatsoever," White answered mildly, but between stiff lips.

"That suits me fine." Cavanaugh lit a long black cigar in defiance of a NO SMOKING sign, and strutted out. All heads turned to watch him go and a buzz of conversation started.

"Wheeuw!" Ralph said in Sandy's ear. "That Pinta Dome area had a big helium strike some years back. Wells in that region are all closed in now, and the government is very hush-hush about the whole thing. What's Cavanaugh up to?"

White picked up another bunch of bids and called Hall to the table.

"You know, John, that bids on land in the disputed Navajo-Hopi area can't be accepted. I've told you so again and again. So has Chairman Paul Jones of the Navajo Council. Why do you keep submitting them?"

"Because I'm a stubborn man, Ken." Hall grinned, tilting his gray head as he always did when he was being stubborn. "And because I

think there's oil under those lands. And because I also think the tribes will get together soon. You just let my bids stand and tell me where I can locate Jones."

"Hosteen Sandez, do you know where Mr. Jones is today?" White asked a lean old Indian who sat next to him.

"Gone to Chinle," was the reply. "Two families there having dispute—with shotguns—about irrigation water. He trying to settle it before Navajo police come."

"Thank you," said Hall. "I think we'll just mosey on up Chinle way."

The jeep followed a good paved road as far west as Ganado, but when it turned north toward Chinle it got back once more on a trail made of stones from which none of the corners had been removed. They were driving through a wild country of mesas, washes and canyons which made conversation almost impossible.

"What do you expect to gain by talking to Jones, John?" Donovan asked once when the road became smoother for a few miles.

"I've been reading so much about summit conferences," Hall answered, "that it just occurred to me we might set one up out here. I want to suggest to Jones that we get some of the more important chiefs of the two tribes to meet out

here in the desert somewhere, where there are no reporters or members of the Land Resources Association hanging around. I'll bet we could accomplish something."

"Good idea," Donovan agreed. "If the tribes weren't continually stirred up by white men with axes to grind they'd soon be able to agree on that boundary line."

"Don't mind me, palefaces," said Ralph as he spun the wheel to avoid a particularly hard-looking stone. "But I doubt it. I know both tribes, and . . ."

Crash! The jeep bucked like a pinto pony and the motor roared.

"There goes the second muffler in three months," Ralph shouted, pointing backward to a heap of junk on the trail.

After that, all conversation was impossible until they pulled into the little town of Chinle—and learned at the trading post that Jones had already departed for Tuba City!

"Say, John," Ralph said, as they were standing around waiting for a "shade tree mechanic" to dig a muffler that would fit out of a rusty pile of spare parts that leaned against his hogan, "we can't possibly drive back to the well tonight. Why don't we put up at the Canyon de Chelly camp so I can show Sandy where his great-uncle fit the Navajos?"

"Good idea," said his employer. "You'll have time to show Sandy the cliff dwellings tomorrow, too. Chief Quail lives over in the Canyon de Chelly neighborhood. I want to sound him out on my idea for a summit conference."

The sun was sinking in golden glory behind thousand-foot-high red sandstone buttes when they drove up to the Thunderbird guest ranch at the entrance of the Canyon de Chelly National Monument area. There they obtained two pleasant double rooms furnished after the rugged style of the Old West. When they had showered most of the dust off themselves, they gathered for a fine meal in the timbered mess hall. Then, in the cool of the mountain evening, they went over to a big campfire where a National Park Service Ranger was lecturing to a group of tourists.

"These canyons housed one of the great centers of the Anasazi, or Basket Maker, civilization," the Ranger was explaining. "During the first several centuries of what we call the Christian era, Basket Makers occupied the whole drainage basin of the San Juan River. In addition to baskets, they made fine pottery and woven sandals, but they used dart throwers instead of the later bows and arrows. They built peculiar circular homes with floors sunk a foot or more into the ground. You'll see one of those tomorrow when you visit Mummy Cave.

"When the Basket Makers vanished early in the eighth century, Pueblo Indians occupied the canyons. They built many-storied cliff dwellings over the old caves. They were farmers, but they also made beautiful pottery, cloth, stone tools, and ornaments of copper and gold.

"Coronado, the Spanish Conquistador, may have been looking for this place when he came up from Mexico in 1540 to search for the fabulous riches of El Dorado and the Seven Cities of Cibola. He never found anything but thirst and death."

"Were the Pueblos and Basket Makers related?" someone asked.

"Yes, they were both Shoshones, like the modern Hopis," answered the Ranger as he threw more wood on the fire.

"More distinguished ancestors for us Utes," Ralph whispered to Sandy.

"Seven or eight centuries ago," the Ranger went on, "the Pueblos grouped their cliff dwellings into large 'apartment houses' situated on sites that could easily be defended. Tomorrow you'll visit White House, Antelope House, and Standing Cow, which are their finest structures. Let me warn you, though, that only people accustomed to conditions in the canyons should drive cars into them. The spring rains are late this year. There is very grave danger from flash floods and quicksand.

In past years, many covered wagons and other vehicles drove into the canyons, got caught in a sudden storm, and were never found. I suggest you rent a car and guide from the Thunderbird Ranch operator."

"What became of the Pueblos?" a tourist asked in an awed voice.

"Nobody knows. Some people think a great drought hit this part of the country and they had to move to an area where there was more rainfall. Others believe that an enemy—possibly the fierce Aztecs—came up from Mexico and killed all the inhabitants. Terrible battles were fought here, we know, before the end. Sometimes Pueblo mummies with weapons still in their hands are found when a new cliff dwelling is explored. The Navajos say the whole place was deserted when they moved in, more than 200 years ago. Now, I want to tell you about the troubles that *they* had with the Spaniards and Kit Carson."

"We'd better go to bed, I think," Hall said to the others in his group. "Ralph knows a lot more about recent history than this fellow does. He'll tell you all about it in the morning."

Sandy and Ralph crawled out of their bunks shortly after sunrise, but they found that Hall had already departed. A note under their door read:

"Have located Chief Quail. Don and I have him cornered and are trying to talk him over to our side. You can use the jeep to explore the canyons this morning but be back by lunchtime, so we can hunt for Hopi Chief Ponytooth. He's up in this neighborhood, Chief Quail says. Happy cliff-hanging."

After a brief argument with the Ranger, who repeated his warnings about flash floods and quicksand, Sandy and Ralph got under way.

"I know this territory like the palm of my hand," the driller said as he drove carefully into dark gorges where the sun shone only around noon. "There really are four separate canyons, you'll notice. From right to left they're Monument Canyon, the Canyon de Chelly proper, Black Rock, and the famous Canyon del Muerto, which means Death Canyon. That's the one where the Navajos made their last stand against Kit Carson."

"How did he ever drive them out of a place like this?" Sandy marveled as he stared up at towering cliffs that rose almost straight up from the grass-covered canyon floor. "One man on a cliff should have been able to stand off a regiment by rolling rocks down on their heads."

"That's where your great-uncle was smarter than General Custer," answered his guide. "He didn't try to attack. If he had, the Navajos would

have massacred his troops. Instead, Kit sent small raiding parties of cavalrymen down the centers of the canyons where they were fairly safe from rocks and arrows. They had orders to shoot every sheep, goat and cow in sight. After they did that, they retreated and blocked all exits to the canyons."

"And the braves and their families just stayed inside and starved?" Sandy was really shocked.

"What else could they do? See that big blue-and-white picture of a cow drawn on the canyon wall over the cliff dwelling to your left? That's a sort of monument which the poor old Navajos made to remind them of their slaughtered herds. After they finished it, they all came out and surrendered."

"Gee whiz!" was all that Sandy could think of to say.

"We have time to explore just one cliff house," Ralph continued. "It might as well be Standing Cow. Come on."

They climbed a swaying ladder to reach one of the dwellings. This had been restored by archaeologists and looked as though its Indian inhabitants had departed the night before, instead of a long 400 years ago. There was the loom on which they had woven their cloth. Graceful pottery with decorations in glaze was stacked in a corner. A bedboard rested on two timbers cemented into the rear wall.

"These were de luxe apartments, probably occupied by the chief," Ralph explained. "They have one big drawback—no hallways. You have to go through the living quarters to get to the other rooms. Come back here and I'll show you one of their kivas, or ceremonial rooms."

He led the way into a much larger cave that had a balcony overlooking a round hole some twenty feet across by six feet deep. Light filtered into the gloomy place through one small window in the cliff face.

The driller turned a flashlight beam into the hole. Sandy saw that its bottom could be reached by steep stone stairways. A wide bench ran around the sides of this strange pit. In its center stood several stone tanks about the size of bathtubs.

"When the cliff dwellers wanted to talk to their gods," said Ralph, "they climbed down into a kiva hole like this and stayed for days without eating, drinking or sleeping. They practiced a kind of self-hypnotism, I guess."

"Maybe," Sandy guessed, "they just went down there to take their Saturday-night baths. I don't see any gods—idols, I mean."

"These people didn't have idols—just those tub things," Ralph answered. For a long time he stood staring down into the kiva, as though he were trying to picture his dead-and-forgotten ancestors there, conducting their silent worship.

"We'd better be getting back to the ranch," he said at last, shaking his handsome head as though to clear it of dreams.

"That was a pretty grim thing Carson did to the Indians," Sandy said as they drove back to Thunderbird.

"It was better than a massacre. Only twenty or so Navajos were actually killed by his troops, remember. And you should not forget, either, that Kit was acting under orders from Washington."

"Those Nazi officers who killed innocent people in German concentration camps said they were acting under orders too," Sandy pointed out grimly.

"Oh, but Carson never tried to excuse his actions. At first, he thought he was doing the right thing to move the tribe onto a fine new reservation. But as soon as he had herded several thousand of them over to Bosque Redondo on the Pecos River, he changed his mind. Bosque Redondo means Round Forest in Spanish, but he found there weren't more than half a dozen trees on the whole place, while good grazing grass was almost as rare. It was a hellhole and the Navajos hated it. They ran away or, if they weren't able to do that, they just sat down and pined. A thousand of them died there from hunger and homesickness.

"So Carson climbed on a train, went to Wash-

ington, and told the Great White Father just what was happening. When he warned that all the Navajos at Bosque Redondo would be dead in a few years, nobody seemed to mind very much. 'Good Indian: dead Indian,' you know. When he added that the government was spending a million dollars a year just to help them die, a few ears pricked up. But when he said that half the Navajos had never left Arizona and that they were threatening to go on the warpath to help their imprisoned brothers, Carson got action. He was ordered to return the tribe to its original reservation—this one—and was given money to help them get a new start."

"I'd like to tell Miss Gonzales what you just told me," said Sandy. "I don't want her to dislike me because she thinks my great-uncle was a monster."

"Well, why don't you? Her school trailer is located only about twenty miles from our well. Drop in on her when you get a day off."

"Gee, I'd like to, Ralph," said Sandy as they approached the ranch gate where Hall, Donovan and Chief Quail were waiting for them, "but she seemed pretty angry that night at the motel."

"Kitty's a fine girl," Ralph answered slowly, "even though she tries to be more Navajo than the Navajos. Fact is, I'll let you in on a secret: My last oil royalty check from the wells in the

Southern Ute reservation amounted to $12,000. When I get a few more of them in my bank account, so I can give her a big marriage gift, I'm going to ask my uncle to ask *her* uncle if she'll have me for a husband."

"What have uncles got to do with marriage?" Sandy stared at Ralph in amazement, realizing for the first time that he really was an Indian and had ways of doing things that were hard to understand.

"It's just an old Navajo custom." Ralph grinned uncomfortably. "And that reminds me: If Kitty gets uppity about Carson again, you tell her I said to be nice or I'll ask my great-uncle to step on her great-uncle's shadow. That will make her behave!"

CHAPTER SEVEN

Back of Beyond

AFTER A HURRIED LUNCH that ended with flabby apple pie, as Sandy had discovered most lunches usually did in the Southwest, the five men climbed into Quail's pickup truck. (The Chief insisted that the jeep couldn't possibly travel the trails they would have to follow.) Then they set out for the wild Dot Klish Canyon area, to the northwest of Chinle, where the Navajo thought Chief Ponytooth and his wife were "squatting," as he put it.

Ralph chose to sit on a box in the bed of the truck because, as he said frankly, "If I'm in the cab with the Chief, we'll quarrel."

Sandy joined the driller on another box that was scantily padded with a piece of blanket. Soon both of them were hanging onto the truck body for dear life as they bumped and blundered over a road that made previous ones they had traveled seem like superhighways.

Sometimes their way led through tall thickets

of mesquite and briars that threatened to tear the clothes off their backs. Then they would ford a stream so deep that water splashed over them. The machine, though still fairly new, groaned and knocked like a Model T at the torture it was undergoing.

"This territory is what Australians call 'back of beyond,'" Ralph shouted at one point as he dodged low-hanging tree branches. "We need a covered wagon."

At another, when they all had to get out and push the machine from a gully into which it had slid, he made sarcastic remarks about the driving abilities of all unprintable Navajos.

Once he wiped the streaming perspiration from his face and neck, pointed to a mass of black clouds in the west and muttered, "Thunderstorm weather. A good day to lie under a tree and take siesta." Mostly, though, the Ute gritted his teeth and kept silent as the pickup fought its lonely way across the fringes of the Painted Desert.

It was midafternoon and the sticky heat was stifling when they reached the great box canyon where the Hopis were supposed to be living.

"I don't like the feel of this place," Quail said as he stopped the truck on a high bank that overlooked the trout stream pouring out of a narrow cleft between two buttes. "Look at those thunder

clouds piling up. I should not wish to lose my car in there."

"*We* don't matter, of course," Ralph grunted. "How far is it to Ponytooth's place?"

"About half a mile, I think," the Navajo answered.

"Then let's leave your precious hunk of junk out here and walk in." Ralph set off down a faint trail at a fast lope that the others found hard to match.

Around a sharp bend in the canyon they came at last to a heap of sandstone ruins. The little group of circular pueblos looked as old as the surrounding hills. Most of the walls had crumbled or been knocked apart in some strange manner. Only one had a roof of pine or cottonwood beams, light poles and bunch grass. In front of it a tiny old woman sat smoking a long pipe.

Her face, brown as chocolate, was a mass of wrinkles. But her black eyes, which peered out of the folds of a heavy wool blanket, or manta, were sharp with intelligence.

She made no answer to their questions in English and Navajo. When Ralph spoke to her in the basic Shoshonean language, however, she pursed her lips and pointed up the canyon with them.

"Ponytooth is probably up there hunting

somewhere," Chief Quail said. "We'd better find him before it gets too dark."

Half a mile farther up the stream they found the old Chief. He was stalking a jack rabbit with, of all things, a bow and arrows. Slanting rays of sunshine that broke through the gathering clouds showed that he was dressed in the ancient Hopi costume. It consisted of a woolen poncho, or blanket, with a hole cut in the center, through which he had thrust his white head, baggy trousers slit up to the knees on the sides, deerskin leggings wrapped round and round his spindly shanks, and beautifully woven sandals. Only his belt, which was mounted with large silver discs, showed that he was a person of importance.

"I didn't know that clothing like that existed any more, except in museums," Ralph said softly.

The Hopi shot the jack rabbit through the heart, retrieved his arrow, and came toward them, carrying the animal by its long ears. When Hall went forward, with outstretched hand, the Hopi showed no surprise whatever.

"No spikum English mush," he said gravely in return to the oilman's greeting.

Chief Quail tried him in Navajo—and got a cold stare in return.

"I think I can make him understand what we want, if it's O.K. with you, John," said the driller.

At a nod from Hall he spoke at great length in Shoshone clicks and gutturals.

Chief Ponytooth listened, at first politely, then with a growing frown. At last he held up a hand and replied with a torrent of words. As he spoke, thunder rolled in the far distance.

"He says," Ralph translated, "that he is an old man. Soon his body will be placed in a crevice in the rocks, and his spirit will go northward to join those of his ancestors at a place called Sipapu. Meanwhile, however, he has been ordered by the Hopi Council to live here in the ruins of Awatobi, a pueblo or village that was destroyed by the Spaniards hundreds of years ago because the tribe had killed all of their Christian missionaries.

"Although he knows that the Navajos claim this territory as part of their reservation, he declares that it is part of Tusayan, an ancient province belonging to the Hopi and their cousins, the Moqui. So long as he stays here, he believes, neither Navajos nor palefaces will dare to steal this land."

"Tell him we don't want his confounded desert," Hall said impatiently. "Tell him we won't kill a single jack rabbit or harm a piece of sagebrush. Try to make him understand that all we want to do is to remove oil from far beneath the ground. In exchange we will give his people money so they may build schools and hospitals."

When this was translated, Ponytooth straightened his bent back and glared at them defiantly. His face, under its broad white hairband, took on a haughty grandeur. Then he spoke again, waving his skinny arms and beating his breast for emphasis.

And the thunder rolled nearer with every sentence he uttered.

"He says—" Ralph shrugged—"that neither the Navajos nor the palefaces have ever given his people anything. They have always taken things away —cattle, wheat, the spirits of young warriors. They are his enemies until the end of the world. He is weak and old now, but you can only take this land by killing him."

A spatter of cold rain emphasized the Chief's meaning.

"We had better leave this place," Quail said as he gripped Hall's arm. "It must be raining hard farther up the canyon."

"Not yet," Hall snapped. "Ralph, tell the Chief that we understand how he feels and that we will go, if he wishes. But warn him that if he does not accept the fair offer we wish to make him, other men may come and take this land from him, as they took other things from his ancestors. Try to make him understand that we are his friends."

The Chief understood the last English word. "Frens!" he screamed. "Frens! Frens! Frens!"

In the rapidly gathering darkness the canyon walls echoed with his shouts. "Paleface, Navajo, never frens to Hopi!"

Chief Ponytooth, last of the Pony Clan, burst into wild whoops of sarcastic laughter. At the same moment, thunder rolled deafeningly above their heads, lightning danced about the canyon walls like angry spirits, and the rain began coming down in bucketfuls.

"Out!" yelled Chief Quail. In his excitement he forgot his careful grammar. "Water come. We die!"

He spoke too late. A roaring sound had begun far up the canyon. Before they could move, it grew deafening. At the same time a five-foot wall of yellow water swept down upon them like an express train.

After that, things happened too fast to be described. As he ran madly toward the canyon wall with the idea of climbing out of reach of the flash flood, Sandy slipped on a bank of wet clay and fell headlong. Ralph grabbed him by the collar and barely managed to drag him to safety.

Hall let out a wild yell as the dry sandbank on which he had been standing a moment before absorbed water like a sponge, turned to quicksand, and began to suck at his legs. Just before the wall of water struck, Donovan snatched up a

long branch and held it out. Hall grasped it and, in turn, was pulled to comparative safety.

By this time the little trout stream had turned into a raging torrent. A great pine tree in its bed, roots torn loose by the tremendous sudden push of the water wall, came crashing down. A branch caught Ponytooth across the thighs and dragged him from sight beneath the flood.

Chief Quail, who was nearest to the Hopi, acted instinctively. He plunged into the frothing, rock-filled water and fought it with all the power of his massive shoulders. A moment later he was tumbling downstream with the old man held tightly in his arms.

While the others watched spellbound in the gathering darkness, the Navajo fought the cloudburst. Fifty yards downstream, he managed to hook a leg around a rock that still held firm. His face purple with effort, he finally succeeded in pulling his apparently lifeless burden to the top of a dry ledge.

Almost as quickly as it had come, the flood subsided. Dripping, cold and shaken, the little party headed back toward the pueblo ruins. Chief Quail walked ahead, carrying the Hopi in his arms.

An hour later Donovan rose from examining the Chief and looked across a campfire at the rest

of them with a worried frown. The geologist had found Ponytooth's only apparent injury—a broken leg—and had set it with expert fingers. But the old man failed to return to full consciousness thereafter. He threw his arms about and shouted wildly. His cheeks burned with sudden fever. When his little brown wife crept to his side, he ordered her away in a frenzy.

"I can't understand it," said Donovan. "So far as I can tell, he has no internal injuries. But the life is running out of him like water out of a sack. I'm afraid he may be dying."

"He *is* dying," Ralph spoke up softly. "I've been listening to his ravings. He thinks he has offended the water spirits by even talking to palefaces and a Navajo and a Ute about the tribe's sacred boundary line. He thinks he must die to make his peace with the spirits. And so, he *will* die before the night is out."

"Hosteen Quail," said Hall, "Navajo chiefs are medicine men as well, aren't they? Can't you paint a sand picture or something, and cure Ponytooth of his delusion?"

"No," the Chief answered sadly. "Navajo magic works only for Navajos."

"Let me try," Ralph said suddenly. He gripped the Hopi's shoulder to get his dazed attention, and spoke to him for a long time in Shoshonean.

The old man shook his head back and forth in disagreement, but he stopped picking at the moth-eaten buffalo robe which Donovan had thrown over him.

"I told him that the water spirits were not angry," the Ute said at last. "He said I lied. I told him we are all his friends. He said to prove it. So I told him I would prove it by singing him well." Ralph stood up slowly and paced around the fire three times in a counterclockwise direction. "My father was a medicine man," he went on. "As a boy I watched him sing people well, but I never was allowed to try it, of course. . . . Well, here goes. . . . Wish me luck, Hosteen Quail."

He leaned his head back against the ruined pueblo wall for a moment, as though gathering strength from the ancient building. Then he began to sing in his rich baritone.

At first the chant went slowly, slowly, like the beat of buffalo hoofs on the open prairie. Then, as Sandy held his breath to listen, the rhythm became faster. The words meant nothing to the boy, but somehow they painted pictures in his mind: A wild charge of naked Indian horsemen, dying in a hopeless effort to capture a fort from which white rifle smoke wreathed. The thundering rapids of some great northern river. Chirping

of treetoads in the spring. A love song on some distant mesa. A bird call. The silence of a summer night. . . .

"There!" Ralph whispered at last, his broad face dripping sweat.

He reached under Ponytooth's robe and fumbled there for several moments. Almost, he seemed to be withdrawing some object from the old man's body—something red and wet—like a fingernail!

The Hopi gave a long sigh. "Frens," he murmured as he sank into peaceful slumber.

"He'll be all right now," said the Ute, "providing we take him to the hospital at Lukachukai quick to get that compound fracture fixed."

He stumbled out into the darkness, which now was spangled with stars.

Her eyes round with faith and wonder, the little brown woman followed him. She was carrying a pot of steaming coffee.

The less said about that awful midnight drive to Lukachukai, the better. Hall got them there somehow, while Chief Quail and Ralph held Ponytooth in their arms during the entire journey to protect his leg.

Then they had to go all the way back to Chinle for the jeep, but not before Chief Quail had made a detour to toss a piece of yellow carnotite ore

on the wishing pile which stood near the entrance to Canyon de Chelly.

"It's not that I like Hopis any better than I do Utes," he said shamefacedly. "It's just that I want Ponytooth's leg to get well quick so we can settle the boundary dispute."

"Well, here, I'll chuck something on your silly pile, too." Ralph twisted a ring off his finger and tossed it onto the big mound of stones. "Me Boy Scout. Always do good turn." But he turned away so the others couldn't see his face.

They got a few hours' sleep at Thunderbird, but a much-relayed telegram dragged them out of bed before sunup. It was from Jack Boyd, the diesel engine man at the well, and it read:

SHE'S ACTING UP STOP HAVE HER STUFFED FULL OF MUD STOP HURRY

More dead than alive, they pulled onto Hall's property to find that things had calmed down. Drilling was proceeding as usual, in fact, and Boyd was covered with embarrassment.

As Ralph and Sandy stood outside the bunk trailer, almost too tired to go in and take their clothes off, the driller said lazily, "See that big mountain there to the north? What does it remind you of?"

Sandy blinked the sleep out of his eyes and

stared. The mountain in question had a big round cliff at one end, a long high ridge in its center, two branching ridges farther along, and sharply pointed cliffs at its other end.

"Why," he said at last, "it looks like a man lying on his back."

"Good boy. That's what it is." Ralph grinned. "That mountain is called the Sleeping Ute. It's supposed to be a great warrior who will awake some day, to unite all the Indians. . . . And do you know what?"

"What?" Sandy yawned mightily.

"I thought I saw his big toe wiggle just a minute ago."

CHAPTER EIGHT

Cavanaugh Shows His Colors

LONG BEFORE SUNUP, the screaming of a siren on the rig brought off-duty crewmen pouring out of their bunks in all stages of undress. When Sandy arrived at the brightly lighted well, the night foreman was already halfway through his report to Hall, Salmon and Donovan.

"She started rumblin' an' kickin' at the drill-pipe just like she did yesterday." The fat, oil-smeared man was puffing. "I stepped up the mud pressure an' pulled the siren. She's calmed down now, but the blowout preventers are having all they can do to hold her."

"Good boy," said Hall. "If you had pulled the siren and waited for orders we might have a gusher on our hands and pieces of derrick flying in all directions. How far down are we?"

"Little over 5,500 feet, last time I checked."

"That's the Gallup Pay." Donovan was danc-

ing with excitement. "I knew we'd hit it. Let's take a sample and see what we've got."

The big old diesel roared for a moment. It dragged a bar of iron called a "kelly" out of the square hole in the turntable until the top of the first section of drillpipe appeared.

After the pipe had been securely locked in the turntable so that it could neither fall back into the well nor shoot upward if the underground pressure increased suddenly, two floormen clamped their six-foot-long tongs, or monkey wrenches, around the kelly and unscrewed it from the pipe with great care.

They had eased it off only two or three turns when a frothy mixture with the foul odor of rotten eggs began to squirt from between kelly and pipe.

Donovan caught some of this in his cupped hands. He smelled it, rubbed it between his fingers and then *tasted* it.

"Beautiful!" the geologist crooned. "This is good, high-gravity oil. The sulphur content is high, as you can smell, but refiners know how to take that out. I'll tell you more when I've run a full analysis, but it sure looks as if we've licked the law of averages. Two flowing wells in two tries is 'way above par."

The crewmen, who had been holding their breaths for his verdict, let out wild rebel yells

and spun their battered hats into the air. Jack Boyd and the night foreman hoisted Hall on their shoulders and marched him around the derrick in triumph.

"All right, fellows," the oilman shouted to stop the riot. "You all get new hats, new shoes and bonuses!" As they started another cheer he mounted the drill platform and held up his hand for attention.

"But I'm going to ask you not to wear those hats and shoes, or bank your bonuses, for a few weeks yet. This has got to be a tight well."

"Glory, Mr. Hall," somebody called from the edge of the crowd. "No celebration? That's a lot to ask."

"I know it is, Bill. But look at it this way: With this well under my belt, I can get a big bank loan and hire several more rigs to work this property. That will take me at least a month. If news gets out about this strike in the meantime, what will happen?"

"Cavanaugh and the oil companies that hold adjoining leases will rush in and drill offset wells just outside your boundaries before you can get started," Bill answered glumly. "They'll drain most of the oil out from under your land, like they did up at Cortez last year."

"Right!" said Hall. "I know things have been tough these last few months. I've had to hold up

your pay several times, to make ends meet. But you all hold stock in our company. If you hang on a little longer, we'll all be in clover. So I'm sure you'll keep your mouths shut when the spies come prowling, as they will."

A roar of agreement went up, but then someone said, "How about the kid? He don't own no stock, does he?"

"I know Sandy, and I know his dad," Hall answered. "Also, his bonus is going to be twenty shares of stock. I'll vouch for him." He slapped the surprised boy on the back and added, "All right, gang. Back to work. We'll pull the string and get the well cemented and closed in. Then we'll shut down here till I get that bank loan arranged. Some of you have vacations coming. Take them now. Don will put the rest of you to work running surveys and drilling test wells on our downriver lease. Tell any snoopers that John Hall ran out of cash—which is no lie. I closed out my balance at Farmington last week so I could meet the payroll!"

After the drillpipe was withdrawn and stacked, the combined crews spent the rest of the day mixing an untold number of bags of cement with water. This mixture was pumped down the well to replace the mud that had filled it to the brim.

Once, when they heard a plane approaching, most of the men faded into the trailers while the

others tried to look as unbusy as possible. The ship was Cavanaugh's Bonanza! It circled twice and roared away.

When Salmon estimated that the hole was full of cement, the diesel began pumping mud again. This forced the cement out of the well and up to the surface between the earth walls and the heavy steel casing inside which the drillpipe had rotated.

"How do you ever reach the oil again?" Sandy asked when the operation was completed.

"Easy." Ralph yawned tiredly. "After the cement has hardened, we'll pump out the mud. That will leave a cement plug twenty feet or so thick in the well bottom to keep the pressure under control. When we want to start producing, we just drill through the plug and away we go. Say, why don't you go to bed instead of asking foolish questions? You look as if you had been dragged through a dustbin."

"I was just thinking, Ralph. Since we'll be having some time off, why don't we visit Miss Gonzales' school?"

"You go," yawned the driller. "I've got to get this well capped good and tight tomorrow and then drive to Farmington and try to rent a portable test rig—on the cuff. I'm going to act so poor-boyish that it will break your heart. Casehardened drillers will weep in their beer when they hear my tale of woe."

"Is that exactly honest?" Sandy tried to smooth down his cement-whitened cowlick, as he always did when he was thinking hard. "I mean—we *have* struck oil."

"We'll have struck it for somebody else's benefit if we don't play our cards close to our chests and keep a close guard over our well *and* our tongues." Ralph looked at him shrewdly. "You'll see what I mean in a day or two. And here's some good advice: Watch your step, Sandy. There are some mighty curly wolves in this oil game. Don't try playing Red Riding Hood with them."

Learning that Jack Boyd was one of the men assigned to guard the well from all intruders, Sandy borrowed the engine man's car the next day and headed in the direction of Kitty's school. The going was rough, as usual, but the machine was equipped with a heavy-duty transmission and rear axle, double shock absorbers, an oversized gasoline tank and other features which defied the chuckholes. He made good time and found the school trailer during the noon recess.

Twenty Navajo children of all ages were playing what looked like a fast game of baseball as he drove up. They flew into the trailer like a flock of frightened chickens, and came out trying to hide behind their teacher's skirts.

Kitty greeted her visitor with considerable reserve, but when he told her that Ralph had asked him to come, she became much more friendly and invited him to share her lunch.

He found that the roomy trailer was well equipped for its purpose, with plenty of desks, books, a blackboard and other facilities. It was parked under tall pine trees near the first brook that he had found since he left the well.

"A good place to study," he said to make conversation as he looked out of the big windows at the nearby Chuska Mountains.

"But it's the shower that attracts the children at first," she admitted. "I have a little pump in the creek, you see, so we have all the water in the world. They've never seen anything like it. Most of them live in gloomy hogans where the only light comes through the door and the smoke hole in the center of the room, and where water has to be brought in in buckets. *Hot* water is the greatest luxury they've ever known. They'd stay under the shower all day long, except that they are so eager to learn their lessons."

"Navajos really like to study?" He tried to keep the surprise out of his voice.

"Of course they do. They're bright as silver dollars. Now that they have schools, they're going to surprise everybody with the speed at which they learn."

"Do you ever teach them about Kit Carson?" he took the plunge.

"Why . . ." she stared at him uncertainly. "I mention his name when I have to."

"I think you're being prejudiced." Sandy smoothed his cowlick desperately. Would she throw him out of the trailer for being so bold?

"So that's why you came!" She startled him by bursting into a merry peal of laughter. "That was brave, after the—after the nasty way I treated you at Farmington. Very well, teacher. Tell me why you think Great-uncle Kit was a friend of the Navajos."

Sandy began haltingly, but soon warmed to his subject while the Navajo children came in from their play, gathered around him, and listened intently. Remembering old stories his mother had told him, Sandy related how Kit, an undersized, sickly boy of fifteen, had learned to make saddles so he could get a job with a wagon train that was heading west from his home town in Missouri.

He went on to tell how his great-uncle had overcome endless hardships to become famous as a hunter, trapper and scout with Frémont's expedition. He described how Kit had driven a flock of 6,500 sheep across the Rockies to prevent a famine that threatened the early settlers in California. He explained the happy ending to the blockade

of the Navajos in the Canyon de Chelly, and wound up by telling how Carson had left his deathbed to go to Washington and make one more plea for government help for "his Indians."

"That's about all," he concluded, "except that a town and a river in Nevada, and an oil field in New Mexico are named after Kit Carson. He *must* have been a good man."

"Perhaps he was," the girl said softly while her pupils smiled and nodded their dark heads. "I'll be kinder to him when I teach a history lesson after this. He sounds a lot nicer than some of the people I have met recently. That Mr. Cavanaugh, for instance . . ." She turned up her snub nose and let her voice trail off.

"Cavanaugh!" Sandy cried. "Has he been prowling around here too?"

"Yes. He drove through here this morning in a truck. Said he was making some sort of a minerals survey of school lands. Also said he'd stop by again after school. Will you stay here until he has gone, Mr. Cars—Mr. Steele? I can't bear him."

"I will if you'll call me Sandy," the boy said bashfully.

"All right, Sandy. And you may call me Kitty."

"Cavanaugh certainly gets around," Sandy said. "Did he have anyone with him?"

"Yes, a young man who seemed to worship the

ground he walked on. *He* was nice enough, but, well, sort of dewy-eyed, if you know what I mean."

"I know," Sandy grunted, "and not quite dry behind the ears, either. That was Pepper March."

"Well, time to get classes started." Kitty jumped up with a flutter of skirts and shooed her children to their desks. For the next two hours, while Sandy listened admiringly, she was an efficient, understanding schoolma'am. As he followed the recitation he had to admit that, as she had said, the Navajo children were "bright as silver dollars." They displayed an eagerness to learn that almost frightened him. Very few youngsters showed that hunger for knowledge back at Valley View High.

That got him to thinking about poor old Quiz. How he would have enjoyed this visit. What tough luck! But maybe he'd have a chance to get some sort of line on Cavanaugh, the big lug.

The roar of an approaching truck jerked him out of his reverie. Kitty quickly dismissed her pupils and she and Sandy were alone in the trailer when Cavanaugh strode in, closely pursued by Pepper.

"Oh!" The big man frowned at the unexpected visitor until Pepper rushed forward, shouting Sandy's name, and shook hands as though his school rival were the best friend he had in the world.

Then Cavanaugh turned on a smile as bright as a neon sign and insisted on shaking hands too.

"I've heard a lot about you from Pepper," he boomed. "Wish you were on my team instead of John Hall's. Say! I heard you had a bit of luck at your well. Is that right?"

"Luck?" Sandy stammered, wondering how on earth he was going to get out of this one.

"Oh, sure. Everybody knows about the telegram that brought you all tearing back from Chinle. Did the well come in?"

"It . . . We . . ." Sandy almost swallowed his Adam's apple and his face went white under its tan. What on earth could he say?

Cavanaugh misunderstood the reason for his hesitation and lost his momentary advantage by rushing on.

"Oh, come on, son." He pounded the boy's shoulder with a great show of affection. "You don't owe a thing to that old skinflint Hall. Give me the real lowdown on the well and I'll make it very much worth your while."

Sandy jerked away, his fists clenched in fury, but Kitty stepped quickly between him and his tormentor.

"Mr. Cavanaugh," she said in a voice that dripped ice water, "you're new around the oil regions, aren't you?"

"What do you mean?" The electronics man

pulled in his dimpled chin as though the girl had slapped him.

"Out here in the Southwest," she said slowly, "folks don't pry into other folks' business if they know what's good for them."

"Well . . . I . . . You . . ." His face turned scarlet. "You can't talk to me . . ."

"I can, and will." Her black eyes flashed fire. "Your truck is trespassing on school property belonging to the state of Utah. Remove it at once!"

Cavanaugh opened and closed his mouth several times, like a fish out of water.

"You'll both be sorry for this," he gritted like a stage villain. "Come along, Pepper."

"Do you . . ." Sandy spoke through a dry throat after Cavanaugh's truck had thundered away. "Kitty, do you live here in the trailer?"

"Why, of course." She looked at him oddly. "There's not the slightest danger."

"I'm not so sure, now. Couldn't you stay with one of the Navajo families in the neighborhood for a while?"

"Then who would protect the school? It's more important than I am."

"But . . ."

"Don't you worry, Sandy Carson Steele." She patted his arm. "The Navajos are my friends, and they're no friends of Cavanaugh. I'll tell them

what's happened and they'll take good care of me. Now you had better get back to the well as fast as you can. The roads are completely impossible after dark."

CHAPTER NINE

Fighting Fire with Fire

WHEN HE GOT BACK to the well Sandy found that Hall had already set out on his fund-raising campaign while Donovan had locked himself in his trailer laboratory and was running analyses on oil samples he had taken before the cement was poured. Ralph had just finished welding a heavy cap to the top of the casing.

"I defy anybody to find out what's down there until we're ready to let them know," he said as he grinned at the tired and dirty boy. The grin changed to a frown. "What have you been up to this time, Sandy? You look like something the cat refused to drag in!"

When he learned about the events at Kitty's school, the driller nodded grimly.

"I warned you about the curly wolves," he said. "Go get cleaned up and have some supper. Then come over to the lab. We'll talk to Don about this."

The geologist smoked thoughtfully while Sandy

reported. Then he knocked out his pipe and said, "He's impossible."

"Who's impossible?" Ralph asked.

"This man Cavanaugh. No man can spread himself as thin as he has been doing. Look at it this way." He held up a long finger stained with chemicals. "First, he's bidding for helium leases on land where he wouldn't be allowed to drill. Second—" another finger went up—"he's bidding for uranium leases although the government isn't buying ore from companies that don't have mills. Third, he's spying on our well. Fourth, he's trying to lease land in the disputed San Juan River bed. Fifth, he's prospecting on school lands without asking anyone's permission. Hmmm! I'll run out of fingers pretty soon. Sixth, he's peddling electronic exploration equipment that isn't worth a hoot when used by itself. Seventh, he's operating an unlicensed light beam communications network. Eighth—and here's something I learned when I drove over to Farmington with John and we called Lukachukai to find out how Chief Ponytooth is getting on—Cavanaugh flew down there yesterday and almost pulled the hospital apart trying to get permission to talk to the old man."

"That means he hopes to get in on the ground floor if the Navajos and Hopis settle their dispute," said Ralph.

"Either that or he wants to hurt John by convincing the Chief that the tribes shouldn't get together."

"How is the Chief feeling?" Sandy asked.

"Just fine, the nurse told me. He's tough as shoe leather. Now, is there anything else about Cavanaugh's activities that we should consider?"

"Why does he work day and night to convince people that he's a heel?" Ralph contributed.

"Quiz thinks there's something wrong with the football stories he's always telling," said Sandy.

"All right," Donovan went on thoughtfully. "I suggest that a lot of the things Cavanaugh is doing are meant to be camouflage. He's throwing up some sort of smoke screen to get people confused about his true intentions. And, since we're the ones most likely to get hurt by whatever he's really up to, I also think we had better do a little investigating. Does either of you have any suggestions?"

"If he were sending up smoke signals instead of talking on a light beam, I'll bet I could soon find out," the Indian said.

"That's an excellent idea, Ralph." The geologist fired up his pipe and sent clouds of smoke billowing through the crowded lab. "Eavesdroppers never hear anything good about themselves, they say. Nevertheless, I think we should

fight fire with fire by listening in on him and learning the worst."

"But how *can* we listen in?" Sandy objected. "Even if we got high enough to intercept his beam—in a helicopter, let's say—he would know something had gone wrong when his receiving station didn't reply. He'd stop talking."

"There's another way to go about it," Donovan replied. "I'm a pretty good geophysicist as well as a geologist, Sandy. I have to be out here, where I may go out looking for oil and find a uranium lode if I keep my eyes peeled and my Geiger counter turned on.

"Over on that table—" he nodded toward a small electric furnace and a collection of retorts, chemicals and test tubes on one corner of his work bench—"I have equipment so sensitive that I can burn the branch of a pine tree, or even a bunch of loco weed and find out whether the roots of that tree or weed reach down into a uranium ore deposit. With it, I can detect in the ash as little as one part in a million of any radioactive ore the plant has sucked up from underground in its sap. Which reminds me that any time you run across a patch of loco weed, let me know immediately. The poisonous stuff seems to like to grow on ground in the vicinity of uranium.

"All right. Any physicist understands the princi-

ples of electronics, the properties of light, and so on, doesn't he?"

Sandy nodded with growing excitement.

"Also, you may have heard that the FBI has an electronic gadget so sensitive that it can eavesdrop on the conversations of crooks, even though they may be sitting in a boat half a mile from shore."

"I'll bet the Shoshonean water spirits take a dim view of that," said Ralph, grinning.

Donovan waved him to silence with his pipe and continued.

"Now my guess is that Cavanaugh is using a lot of power from a portable generator to produce a beam bright enough to be seen a hundred or so miles away. And it's a lot easier for him to modulate that current so it will modulate the beam than to use revolving mirrors or some other mechanical means to do the job. There is bound to be considerable leakage in a circuit of that kind. I think I can go to one of the radio supply stores in Farmington tomorrow and pick up enough parts to make an electronic 'ear' that can tune in on that leakage if we get it within a hundred feet of Cavanaugh's transmitter."

"Sherlock Donovan," said Ralph, "I take off my hat to you."

The haywire "ear" that Donovan built during the next several days with what little assistance

Sandy was able to supply didn't look like much. It was just a collection of transistors, fixed and variable condensers, coils and verniers mounted on an old breadboard. But it had the advantage of being light and portable. And, when they tried it out with the help of their radio receiving set, it worked!

They found that, with the set's loudspeaker disconnected, they could place their gadget several hundred feet away and hear the programs perfectly, either on the short-wave or regular broadcasting channels.

"That does it," Donovan finally said after a careful series of night tests. "We don't know the frequency that Cavanaugh is using as a modulator, but this thing is flexible enough to tune in on practically any wave band. Now the question becomes, when do we try it out?"

"Why not right now?" Ralph asked.

"Boyd has gone in to town, so I'm in charge of keeping an eye on the well," said the geologist. "I can't go with you tonight."

"Sandy and I can handle it," said the driller. "We'll take the jeep. If we get in a jam we'll send up a rocket or something."

On the slow, twenty-mile drive to Elbow Rock, Ralph spun old tales about Ute scouting expeditions and buffalo hunts, but Sandy scarcely listened. He was feeling miserable, and wished

for the first time that he was back home in Valley View.

"You don't like what we're doing, do you?" Ralph said at last.

"Well, gee. Eavesdropping seems sort of sneaking."

"I know it does, but don't forget that we're dealing with a sneak. Tell you what: you stay in the car. I'll take the ear in."

"No," Sandy said firmly. "I'll do anything I can to help Mr. Hall. Besides, I helped build the ear and know just how it works. I'll carry it."

They parked as close to Cavanaugh's brightly lighted trailer as they dared. Then Sandy strapped the detector on his chest and walked slowly up the mountain in darkness so intense and silent that it could almost be felt. Remembering the lay of the land from the time that he and Quiz had visited the spot with Pepper, he managed to stay mostly on the trail.

He was still several hundred yards from the trailer when the night exploded in a blare of savage noise. Several large dogs had started baying furiously near the trailer. A door opened. Cavanaugh shouted angrily at a pack of long-legged animals that leaped and whined in the shaft of light.

When quiet had been restored, Sandy inched forward once more. But it was no use. The chorus

of barks rose louder than before and several of the dogs started in his direction. With mixed emotions of annoyance and relief, he returned to the jeep and reported.

"Dogs!" Ralph growled. "That means Cavanaugh really has something to hide. What did they look like?"

"They had long legs, sharp noses and big white teeth."

"Doberman pinschers, I'll bet. Say! Tim Robbins breeds Dobermans over in Bluff. They make better sheep tenders than shepherds, he claims. Let's pay him a visit, even if it is late." He started the jeep.

"What are you planning to do?" Sandy asked sharply.

"If Utes could behave like buffalo, there's no reason why I can't be a dog," Ralph answered.

"But you don't have a dog skin," Sandy objected.

"I'm going to get one."

Old man Robbins was in bed when they arrived at his home on the outskirts of the little mining town. He came downstairs in his nightshirt when he recognized Ralph's voice, made coffee for his visitors, and listened to their request without surprise.

"Why, sure, I've got a few skins," he said. "Here's one that belonged to poor Maisie. She

died of distemper last year. I was going to upholster a chair with her, but you can have her for a dollar."

"Mind if I take a look around your runways and kennels, Dad?" Ralph asked.

"Go ahead, but don't get yourself bit, young feller." The old man shook his head at the strange ways of all Indians.

Five minutes later they were headed back toward Elbow Rock.

"Phooey!" said Sandy. "You smell like dog, all right."

"I rolled around a bit in the kennels." Ralph's grin was just visible in the light from the dash bulb. "Now I've got to start thinking like a dog. Don't bother me, human!"

When they arrived at their destination the driller took a brief lesson in the operation of the ear, slipped its harness over his shoulders, and draped Maisie's hide around his hips.

"Keep your fingers crossed and say a prayer to the water spirits," he whispered just before he faded into the velvety darkness.

For long moments Sandy held his breath, expecting a renewal of that wild barking. But it didn't come. High on the Elbow Rock the aluminum trailer glowed undisturbed in the soft light pouring from its picture windows.

A trout, leaping in the stream nearby, caused

the boy to start violently. He tried to relax but that only made him listen harder. Once he thought he heard a strain of music coming from the trailer. Hours later, it seemed, an owl's hoot made his hair stir on his scalp. He smoothed down his cowlick and then gripped the wheel of the car with both hands to stop their trembling. What if Dobermans didn't always bark before they attacked? What if Ralph was up there . . .

"I'm back."

Sandy almost yelled with relief as his friend materialized out of nowhere and climbed nonchalantly into the car. "Wha . . . what happened?" gasped the boy, gripping the Indian's arm to see if he really was real. "You fooled the dogs?"

"Nothing happened. And your little friends never batted an eyelash. I'm good, I guess." He removed the skin and tossed it into the rear of the jeep.

"What do you mean, nothing happened? Didn't the ear work?"

"It worked perfectly." He started the motor and jammed the car into gear.

"What did you hear?"

"Music," said the Ute disgustedly. "Highbrow music. Bach and stuff."

"Was it code of some kind?"

"Nah!" Ralph spat into the night. "Your friend Pepper would say, 'Come in, Gallup. I've got

something here that you'd like: the umpteenth symphony by so-and-so.' Then he'd play a record and say, 'How did that sound, Gallup?' And Gallup would answer, 'Clear as a bell, kid. Keep it up.' Or Window Rock trailer would come in, ask for a Belafonte number, and then say it was fuzzy and to sharpen up the beam. Craziest performance I ever heard."

"Maybe they're just lonesome, way up here," Sandy said with great relief.

"Maybe. But it's a mighty expensive way to be lonesome."

"Or they could be testing," the boy went on with less assurance.

"That sounds more like it."

"Or they're killing time while they wait for a message of some kind?"

"Now you're cooking with LP gas. The question remains: where is that message going to come from? I don't like this business, Sandy. It gets screwier. I wish we could monitor his station every night, but that's impossible, of course. Well, at least we know our ear works and that Cavanaugh keeps a kennel. I wonder what John and Don will make of this one."

"When will Mr. Hall be back?" Sandy was glad for a chance to change the subject.

"Next week, I think. Keep this under your hat, but he has got his loan, and has flown down to

Houston to put some more rigs under contract. Also, I wangled a portable drill rig when I was in Farmington today. That means we'll soon be heading for the other lease to run some surveys. And *that's* a job that separates the men from the boys, I can tell you."

"After what happened tonight I feel as if I'd already been separated." Sandy yawned. "Gee, don't oilmen ever get any sleep?"

CHAPTER TEN

Pepper Makes a Play

A HUGE TRUCK carrying a light folding drill rig and motor rumbled into camp from Farmington two days after the Elbow Rock episode. Donovan then set about organizing an exploration crew. Since the need for secrecy had lessened, only five of the older men were selected to act as a token guard for the property. Ten others, who had had experience in survey work, were directed to take tarpaulins off the long-unused instrument and "shooting" trucks, tune up their motors, and get the trailers set for travel. After Ralph had checked every item on the rented truck and Donovan had made sure that his seismograph, magnetometer, gravimeter and other scientific apparatus were all in perfect working order, the little caravan rolled westward toward Hall's other San Juan River lease.

"We may be going on a wild-goose chase," the geologist told Sandy, who was riding with him in

the jeep that now had the laboratory in tow. "I had an aerial survey run on the property last fall. It shows one anticline that *may* contain oil, but I'll have to do a lot of surface work before I recommend that John spends money on a wildcat well."

"How do you make an aerial survey, Mr. Donovan?"

"I'd like you to call me Don, if you will, Sandy," the geologist said. "And you ought to call John by his first name, too. Oilmen don't go in for formality after they get acquainted."

"Yes, sir . . . Mr.—Don, I mean." Sandy felt a warm glow at this mark of friendship.

"One method of making an aerial survey is by means of photographs taken from a plane or helicopter," the geologist explained. "A stereoscopic color camera is used to provide a true three-dimensional picture of the area in which you are interested. Such photographs show the pitch and strike of surface rock strata and give you some idea of what formations lie beneath them. In addition, prospectors use an airborne magnetometer. You know what a magnetometer is, don't you?"

"It measures small differences in the earth's magnetic field."

"Right! I see that you listened when your dad talked about geology. Well, you fly a magne-

tometer back and forth in a checkerboard pattern over any area where photographs have shown rock formations favorable for oil deposits. Heavy basement strata are more magnetic than the sedimentary rocks that cover them. So, when those igneous basement rocks bulge toward the surface of the earth, your magnetometer reading goes up. That gives you a double check because, if the basement bulges, the sedimentary rocks that may contain oil have to bulge too. And such a bulge, or anticline, may trap that oil in big enough quantities to make it worth your while to drill for it.

"Then, if your money holds out—aerial surveys cost a young fortune—you may run a triple check with a scintillation counter to see whether there's a radiation halo around the anticline. One complication with that is that you have to remove the radium dials from the instrument panel of your plane to keep leakage from interfering with your scintillation readings."

A loud honking from the rear of the column caused Donovan to stop the jeep. Going back, they found that the new drill truck had slipped into a ditch and was teetering dangerously.

Although they had been traveling through such wild and arid country that it seemed impossible that even prairie dogs could live there, quite a crowd collected while they struggled and sweated

for half an hour to get the machine back on what passed for a road. First came a wagon pulled by two scrawny horses and carrying a whole Navajo family—father, mother, two children and a goat. An ancient truck with three more Indians aboard pulled up in a cloud of dust. Then came two Navajos on horseback.

Ralph recognized one of the riders and gravely offered him a cigarette which he held crosswise between his first and second fingers.

"Hosteen Buray, we need your help," said the driller after his gift had been accepted.

The rider said a few words to the other bystanders and things began to happen. The riders galloped away and came back dragging a small tree trunk that could be used to raise the truck axle. The children gathered sagebrush to stuff under the wheels. The woman milked her goat into a pan and presented the steaming drink to the thirsty oilmen. Finally, everyone got behind the machine and pushed with many shouts and grunts.

With Ralph's expert hand at the wheel, the truck struggled back onto the trail.

After receiving "thank yous" from all concerned, the Navajos stood aside and waved in silence as the column drove away.

This time, Sandy asked to ride with the driller because, as he explained, "I've got a lot of questions about things."

"Shoot," said Ralph.

"Why didn't anyone offer to pay those people for helping us?"

"They would have been insulted. That's how Cavanaugh got in bad with them in the first place —by insisting that they take money for everything. Navajos are proud. Next question."

"Why did you hand out cigarettes in that funny way, instead of just offering your pack?"

"You never point anything at an Indian. It might be a gun."

"Oh . . ."

"Anything else on your mind, Sandy?"

"Are all Navajos named Hosteen something-or-other?"

"Hosteen means 'Mister.' Most white men don't use the term. The Navajos resent that, too."

"I guess I've got a lot to learn," the boy sighed.

"You're doing all right." Ralph slapped him on the knee.

They made camp in a forest of pines not far from a dry wash that ran into the San Juan River gorge, and started work at once. Donovan split the party into two groups. One, which he headed, loaded the heavy magnetometer and gravimeter equipment into a truck and set out to check formations revealed by the aerial studies. Ralph and Sam Stack, a burly surveyor who had arrived

with the portable drill rig, took charge of a transit, plane table and Brunton compass. They named Sandy and three others to carry stadia rods and help them make a careful surface survey of the vicinity where the oil anticline was believed to be.

Then began one of the hardest weeks of grinding labor that Sandy had ever put in. All day long he climbed over rocks and fought briary thickets while moving his rod to spots where it could be seen from the various transit positions. His experience on Boy Scout geology field trips kept him from getting lost and enabled him to chip a number of rock formations for analysis. But it was only after he returned to camp at night and propped his tired eyes open with his fingers while watching Don, Ralph and Stack plot lines on a topographical map of the region, that he could form any idea of what was being done.

Hall joined them on the third evening and watched without comment as the work went on. He looked gray and tired.

"You seem bushed, John," said Donovan after they had added the day's data to the map. "Any trouble?"

"Plenty, Don. At the last minute the bank refused a loan. It said that two wells didn't make a profitable field, out here in the middle of nowhere. I had to trade a two-thirds interest in the

other lease to Midray before I got my money."

"That's the way the oil squirts," Ralph said philosophically. "So we're in partnership with a big company."

"I'm solvent, anyway." Hall shrugged. "But we won't make our fortunes unless that first lease turns out to have the largest field in San Juan County. Of course, if this one pays off, too . . ." His voice trailed away.

"I don't know about that, John." Donovan bit his thin lips. "We're finding some underground anomalies, but, confound it, I don't feel right about the situation. For one thing, the plants that usually grow in the neighborhood of a deposit just aren't in evidence. We've found an anticline, all right, but I have a hunch there's mighty little oil in it."

"Excuse me," Sandy interrupted from his seat at the end of the map table, "but if you find a dome, or anticline, doesn't it just have to hold oil?"

"Not at all," the geologist answered with a wave of his pipe. "The oil might have escaped before the bulge was formed by movements of the earth's crust. Or perhaps the top of the anticline had a crack, or fault, through which the oil seeped to the surface ages ago."

"You are going to run a seismic survey, aren't you?" Hall asked.

"Yes, we'll start tomorrow if the weather holds out. The radio says thunderstorms are brewing, though."

"Do the best you can." Hall rose and stretched. "I'm going to turn in now. I feel lousy."

Sandy didn't sleep well, although he, too, was so tired that his bones ached. He was up at sunrise —except that there was no sunrise. The sky looked like a bowl of brass and the heat was the worst he had met with since his arrival in the Southwest.

After a hurried breakfast they drove the portable drill rig, instrument truck and shooting truck to the anticline which lay, circled by tall yellow buttes, about three miles from the camp site.

Once there, Ralph used a small diamond drill to make a hole through surface dirt and rubble. The rest of the crew dug a line of shallow pits with their spades. These were evenly spaced from "ground zero" near the hole Ralph had drilled to a distance from it of about 2,000 feet. While two men tamped a dynamite charge into the "shot hole," other crew members buried small electronic detectors called geophones in the pits, and connected them, with long insulated wires, to the seismograph in the instrument truck.

Just as the job was finished, a roaring squall sent everyone dashing for cover.

"We're going to set off a man-made earthquake in a moment, Sandy," Donovan said when the dripping boy climbed into the instrument truck. "Watch carefully. When I give the word, Ralph will explode the dynamite. The shock will send vibrations down to the rock layers beneath us. Those vibrations will bounce back to the line of geophones and be relayed to the seismograph here. Since shock waves travel through the ground at different speeds and on different paths, depending on the strata that they strike, they will trace different kinds of lines on this strip of sensitized paper. I can interpret those lines and get a pretty good picture of what the situation is down below."

"You mean you can make an earthquake with dynamite?" Sandy cried.

"A mighty little one. But it will be big enough for our purposes. This seismograph measures changes of one millionth of an inch in the position of the earth's surface." He started the wide tape rolling, and picked up a field telephone that connected the three trucks.

"All ready, Ralph?" he asked. "Fine! I'll give you a ten-second countdown. Ten. Nine. Eight. Seven. Six. Five. Four. Three. Two. One. Shoot!"

There was a subdued roar deep underground. A geyser of earth and splintered rock spouted

from the shot hole. The seismograph pens, which had been tracing steady parallel lines on the paper, began tracing jagged lines instead.

"All right, Ralph," Donovan spoke into the phone. "If the rain lets up, have the boys string another line of geophones and we'll cross-check."

They got in one more shot before the increasing thunderstorm made further work impossible. Then Ralph and Hall sprinted over from the shooting truck and spent the next hour listening while Donovan explained the squiggles on the graph.

"So you're not too happy about the situation, Don?" the producer asked at last.

"I hate to say so, John," the geologist answered, "but things don't look too good. We've found a dome, all right, but I'm afraid it has a crack in its top. Look at this." He put away his magnifying glass, lighted up, and pointed his pipe stem at a sharp break in the inked lines. "I can't take the responsibility for telling you to spend a hundred thousand dollars or so drilling five thousand feet into a cockeyed formation like that."

"Once a poor boy, always a poor boy, I guess." Hall shrugged.

"Oh, I haven't given up yet," said Donovan grimly. "The aerial survey shows another possible anomaly about three miles west of here. I'll do

some work on that before we call it quits."

"Take your time," said his employer.

"Hey!" Ralph, who had been standing at the trailer window, staring glumly into the sheets of rain that swept toward them across the San Juan gorge, spoke up sharply. "Take a look at that river, will you?"

They joined him at the window and found that the stream had doubled in size since the rain had started. Now it was a raging yellow torrent that filled the gorge from border to border.

"It beats me," said Hall, "how it can rain cats and dogs in this country one day and flood everything, but be dry as dust the next. When the government finishes building its series of dams around here and all this water is impounded for irrigation, you'll see the desert blossom like the rose, I'll bet."

"The rain all runs off and does no good now, that's a sure thing," Donovan agreed.

"Look," Ralph interrupted. "There's a boat or barge or something coming down the river."

"You're crazy," said Donovan. "Nothing could live in that— Say!" He rubbed mist off the window and peered out into the downpour. "Something *is* coming down. You're right!"

They stood shoulder to shoulder and stared in horror. Around a bend in the stream a heavily

laden homemade barge had plunged into view. A vivid flash of lightning showed one man standing upright in the stern. Blond hair flying, he was struggling to steer the bucking craft with a long sweep.

"That's Pepper March!" Sandy shouted as another flash spotlighted the craft. "He must be trying to prove that the San Juan is navigable."

"He won't last five miles," Ralph snapped. "I've got to go after the young fool. Grab some rope, Sandy, and come along."

There was no rope in the truck, so Sandy snatched up a coil of heavy wire cable used to lower electric logs into test wells. With it over his shoulder, he tore out into the storm after the driller.

They got the jeep going after considerable cranking and headed downstream. It was a nip and tuck race since there was no trail along the gorge. But Ralph put the car in four-wheel drive and tore along over rocks and through flooded washes while Sandy hung onto the windshield frame for dear life. Finally they managed to pull ahead of the tossing barge.

"There's a rapids about five miles downstream," Ralph shouted above the thunder that rolled back and forth like cannon shots among the buttes and cliffs. "He'll never go farther than that. The only

thing I can do is to stand by there and try to throw him a line. It's a long chance. Thank heaven and the water spirits that I learned to rope horses when I was a kid."

They reached the rapids with only seconds to spare. The Indian fastened one end of the cable to the power takeoff at the rear of the jeep and coiled the rest of it with great care at the edge of the gorge. Then he stood, braced against the howling wind, swinging the heavy log in his right hand.

"Here he comes," Ralph said. "What a shame that damned fools often look like heroes. Your friend is probably thinking he's Lewis, Clark and Paul Revere rolled into one. Stand by to start the takeoff and reel him in if I hook him, Sandy. . . . There he goes. There he goes! Stand by!"

Pepper was fighting the rapids now, like some yellow-haired Viking out of the past. It was no use. Halfway through, the awkward barge hit a submerged rock. Slowly its bow reared into the air. The heavy pipe with which it had been loaded started cascading into the boiling water.

Pepper had enough presence of mind to drop the useless sweep, and scramble out of the path of the lengths of pipe as they flew like jackstraws. As he managed to grab the uptilting rail, Ralph's mighty arm swung back and forward. The end of

the cable carrying the log paid out smoothly. Out and down it sped in a long arc.

It struck the boat and slid slowly along the rapidly sinking rail. After one wild look upward, Pepper understood what had happened. He snatched the wire as it went by and looped it twice around his waist.

"Haul away," Ralph whooped to Sandy. "We've caught our fish."

As the jeep's motor roared and the takeoff spun, Pepper was snatched from his perch and dragged helter-skelter through the wild waters. Minutes later Ralph dragged him over the edge of the cliff, choking and half drowned.

"No real damage except a few nasty bruises," the driller grunted after he had applied artificial respiration with more vigor than was really needed. "How do you feel, bud?"

"Awful!" Pepper groaned. Then he amazed them by sitting up and glaring at them.

"That was . . . a stinking trick," he croaked after he had spat out a mouthful of dirty water. "Stringing cable . . . capsizing my barge . . . I'd have made it."

"Whaaat?" Sandy hardly believed his ears.

"I'd have made it, I tell you! I would have!" Pepper wailed hysterically. "Then you . . . then you . . ." He retched miserably.

"Listen, kid," Ralph snapped as he half-

carried the boy to the jeep. "Your Red Cavanaugh ought to be strung up for egging you on to try a stunt like that."

"No!" Tears dripped down Pepper's dirty cheeks. "My idea. He didn't know."

"Bunk! You mean he didn't know you had built a barge and loaded it with pipe? Don't lie! Your boss is a stinking, no-good, lowdown louse."

"Oh, no!" Pepper tried to pull free, then leaned against the side of the car and clung there like a half-drowned monkey. "Red's best boss a man ever had. He's . . . he's wonderful. . . . Likes good music . . . dogs . . . Indians. I'd die for Red."

"That's the point." Ralph rummaged in the back of the jeep, found Maisie's mangy hide, and wrapped it around the shivering boy. "You almost did die. Cavanaugh's next door to a murderer."

Pepper stared at them as if he were waking from a dream.

"You really believe that, Sandy?" he gulped weakly.

"I know it, Pepper." Torn between pity and anger, Sandy gripped the blond boy's arm. "Cavanaugh's a crook!"

"Crook?" Pepper babbled. "No, no!" His knees sagged and they just managed to catch him as he fell.

"A strange boy," said Ralph as they drove back

to camp with the would-be Viking sleeping the sleep of exhaustion between them. "He's in trouble, some way. Maybe he was trying to prove himself, like young Indians once did before they could become braves."

CHAPTER ELEVEN

Serendipity

PEPPER WAS BLACK, blue, stiff and somewhat chastened when he ate breakfast with Ralph and Sandy the next morning. Also, he was disturbed by the fact that Cavanaugh's plane had come over at dawn, circled the wrecked barge in the rapids for several minutes, and then scooted eastward without landing.

"He must have known I planned to run the river," the blond boy admitted. "But why do you suppose he didn't stop to ask whether you folks had seen me?"

"Probably was afraid to." Ralph attacked a big plate of ham and scrambled eggs. "Figures he may be blamed for letting you drown, so he's gone home to frame an alibi. Won't he be surprised when you show up in one of our supply trucks!"

"Gee whiz! Do you really think he's that bad, Mr. Salmon?"

"I think he's worse. See here, kid. Why don't

you stop working for that heel and come over here? I'm sure John will give you a roustabout job."

"No." Pepper shook his head stubbornly. "I signed a contract and I can't go back on my word. Besides, I haven't seen him do anything really bad. I'll admit that some of the things he does seem, well, sort of queer. But maybe you're just too suspicious."

"Maybe." Ralph washed down a hunk of Ching Chao's good apple pie with half a cup of steaming coffee. "Well, it's your funeral."

"I'll keep my eyes open after this." Pepper rose as a honk from the truck told him it was time to get going. "Thanks for everything. And I really do mean for everything."

The Indian stood up and stretched like a lazy panther as he watched their visitor depart. "Crazy kid," he said. "Well, it's time for us to be getting back to the mines, Sandy. Don's staying here for a few days to run some final tests. He has assigned our group to start surveying the other structure. So pick up your rock hammer and stadia rod. Hike!"

The new location proved to be several miles north of the river in a tumbled and desolate region of weathered buttes and washes that already were dry as bone.

"Geologists call those buttes 'diatremes,' "

Stack, the surveyor, explained to the crew as they unloaded equipment at a central spot. "They stick up like sore thumbs because they're really vents from ancient volcanoes. The lava they're made of doesn't erode much although the surrounding sedimentary rocks have been worn away in the course of ages. There are at least 250 diatremes scattered through this Colorado Plateau area, and some of them are rich in minerals. So keep your eyes open while you're prowling."

"Prowling" was exactly the word for what the crew did, Sandy decided after a few days in the broiling sun. He had to admit that the territory was beautiful, in its wild way, but he decided that it was more fit for mountain goats than human beings. More and more, as he slowly worked his way from one rod location to another, measured the slope of exposed strata with his Brunton compass, or chipped rock samples for analysis back at camp, he began to dream of the soft green hills and winding streams near Valley View.

His homesickness grew worse when Hall brought him a letter from Quiz.

DEAR SANDY,

I sure do envy you, out there in God's country. Things are mighty dull around here, although I do get some time for swimming and

tennis, now that Dad is able to hobble around in his cast and help out at the restaurant.

Last Sunday we had a picnic out by the lake. The fishing was swell. And there was a dance at the pavilion afterward. I'm not much for dancing, but I know you like to. Still, you must be having plenty of fun out at the well.

"Fun!" Sandy exploded as he reread that paragraph. He was bathing his blistered feet in the first spring he had found that day and batting at deer flies that seemed determined to eat him alive. Then he read on:

I haven't forgotten about Cavanaugh. Dad says he's a lone wolf and that nobody knows much about him. He came here about two years ago, flashed a lot of money around, and built his lab. Joined the Country Club, Rotary, and so on. Impressed a lot of people with his football talk. Makes good equipment and has several research contracts that take him to Washington quite frequently. His employees think he's a stuffed shirt, too.

I tried to look up his sports record at the library, but the newspapers that should tell about his big game are missing from the files. When Dad gets better, he says I can take a day

or two off and see what I can find in the San Francisco library. I'll let you know. Funny about those newspapers, isn't it?

Give my regards to the gang. I sure do wish I was there instead of here.

As ever,

QUIZ

After he had finished reading Sandy sat for a long time with his chin in his hands, thinking. The survey wasn't going well, he knew. Yesterday, Hall and Donovan had paid them a visit and shaken their heads at the map that Ralph and Stack were drawing.

"This isn't an anticline, John," the geologist had said. "What we have here is fault that has caused a stratigraphic trap. That is, layers of rock on one side of the fault line have been lifted above those on the other side of the crack by some old earthquake. The slip sealed off the upper end of what may be an oil-bearing layer with the edge of a layer of hard, impervious rock. If you drill here—" he pointed with his pipe stem—"you may hit a small pool. Nothing spectacular, you understand, but it ought to more than pay expenses."

"I don't know whether I should take the chance." Hall had shaken his gray head. "I need something better than this to gamble on, the way

things are. Tell you what, Don. There's going to be a bid session at Window Rock next Monday. Keep the crew working here for a few days longer while I drive down and see if I can shake loose a better lease. Ralph, you'd better come along. I hear that the Navajo and Hopi Councils will have some sort of joint powwow at the Rock and I'll want you to keep an eye on it. You come along too, Sandy, and bring the 'ear.' I have a hunch that a lot of things are about to pop."

"Will we have room for Kitty?" Ralph asked. "I dropped over to see her after work yesterday and she told me the school is closing Monday and Tuesday because there's going to be a big Squaw Dance in the neighborhood. She wants to go home and get her best clothes to wear to it. She could drive her own car, of course . . ."

"Kitty's good company," Hall had replied. "I'd be glad to have her along."

A distant hail jerked Sandy out of his reverie. He put on his shoes, picked up his rod, hammer and compass, and started climbing over jagged rocks to the top of a crumbling low butte that was to be the next survey location. The going wasn't too bad because one side of the cone had collapsed, thus providing a slope of debris up which he could clamber with fair speed.

When Stack's transit came in sight, Sandy placed the stadia rod upright so that it could be

seen against the skyline and started the slow business of moving it about in response to the surveyor's hand signals.

Several times he stopped and listened intently. Off to his right, hidden in the underbrush that choked the crater, he thought he heard some large animal moving. A deer, probably, he tried to reassure himself, although he remembered that one of the other crewmen had had a nasty brush with a bobcat several days previously.

"That's it, Sandy," the surveyor in the valley bellowed through cupped hands at last. "Call it a day."

The boy was beating a quiet retreat down the slope when a tired bleat stopped him in his tracks. The animal in there was either a sheep or a calf, and it seemed to be in trouble.

"Better take a look," said Sandy. (He had got into the habit of talking to himself these last few lonely weeks. The noise seemed to keep the homesickness away.)

It was a calf, he found, when he had fought his way into the thicket. And it seemed to be sick. First it would nibble at some plants where it stood, then, lifting its feet high and putting them down gingerly, it would move slowly to another location and repeat the performance. Every so often it let out that piteous bleat.

"Poor thing," Sandy murmured. "Maybe I ought to take it back to camp."

He fished a length of cord out of his knapsack, looped it around the calf's neck and tugged. The animal gave him a glassy stare and wobbled forward.

"Probably a Navajo stray," he said. "Its owners will be looking for it."

When he reached the temporary camp half an hour later, Ralph took one look at the calf and let out an astonished whoop.

"Loco," he shouted. "Hey, gang! Come look what Sandy found."

Men came running from all directions.

"Where did you find it?" Stack demanded.

"Up there. On top of that butte." Sandy pointed.

"Was it eating anything at the time?" Ralph snapped.

"Yes. Some plants that looked sort of like ferns, only they had little bell-like blossoms hanging from stalks in their centers.

"Locoweed," the Indian crowed. *"Astragalus Pattersoni,* Donovan calls it. Sandy, you may have found just what the doctor ordered to get John out of his pinch. I'll get a Geiger counter. The rest of you round up some flashlights, sacks and spades. We'd better take a look at this right away."

"What about my calf?" Sandy objected.

"Oh, stake it out somewhere and give it some water. It may recover. It's just drugged. Indians used to chew locoweed when they went down in their kivas, you know. They said it made them see visions in which they talked to the spirits. Eat too much of the stuff, though, and you're a goner."

Two hours later, after having dug up most of the crater, the men tramped wearily back to camp in the light of the rising moon. The sacks they carried on their backs bulged with loads of black earth mixed with yellow carnotite crystals that made the Geiger chatter madly.

Hall was just driving into camp as they arrived.

"We've found a rich uranium lode or lens, I think, John," Ralph shouted to him. For once he had lost his Indian calm and was almost dancing with excitement.

"You don't say," yawned the producer as he dragged himself out of the car.

"Well!" Ralph stared, openmouthed, at this cool reception. "What's the matter, boss? Don't you care?"

"Where are we going to sell the ore?" Hall asked gently.

"Oh!" Ralph wilted. "I hadn't thought of that. The government only buys from people who have mills."

"Sure. A uranium strike these days is just like money in a safe for which you have lost the combination."

"Excuse me, Mr. Hall," Stack interrupted, "but doesn't Midray own an interest in a uranium mill?"

"Oh, yes." Hall smiled grimly at the surveyor. "Midray owns an interest in most everything. It will be delighted to help me develop the lode—in exchange for three-fourths of the profits.

"That's better than nothing, though." He straightened his shoulders. "A uranium strike will shorten the odds enough so I can take a chance on drilling a well here. Why, what am I grousing about? This could be a real stroke of luck. How did you happen to find it?"

When he had heard the story, Hall slapped Sandy on the back.

"That's what's called serendipity," he said, chuckling. "You remember the three Princes of Serendip in the fairy story: on their travels they always found things they weren't looking for. Congratulations, Sandy. You have the makings of a real wildcatter."

But, as the boy went off to take care of his sick calf, he knew that his employer had been putting on an act. Serendipity or no, John Hall was still running a poor-boy outfit.

CHAPTER TWELVE

Cavanaugh Makes a Mistake

HALL HAD COMPLETELY RECOVERED his good spirits by the time that Ralph brought Kitty to camp at dawn. Just as the sun rose the little party set out for Window Rock in a holiday mood. Hall made one stop for a brief conference with Donovan. Then he drove on to his base camp, arriving in time for breakfast.

Sandy could hardly recognize the place where he had worked such a short time before. Number Two well had been opened and connected to the feeder pipeline through a Christmas tree, while its derrick had been moved to a new location. Three big new Midray rigs were being erected at other spots on the property. Still more derricks were going up on surrounding leases. This was rapidly becoming an important field.

Hall had a short talk with the Midray superintendent, a big man who reminded Sandy of Cava-

naugh and who acted as if he owned the place. Then they were on their way again.

"The lease looks like Times Square," Hall grunted as he headed the jeep toward Shiprock. "Makes me uncomfortable. I like to work where there's plenty of room to swing a wildcat."

"I bet you still prefer to use a burro when you go prospecting, you old sourdough," Kitty teased him.

"Well, a burro never runs out of gas or breaks a spring, and it has a better horn than a jeep," Hall said, grinning. "When a burro brays, even the mountains have to listen. That's why he's called a Rocky Mountain canary, I suppose."

They reached Route 666 in good time, turned south between Shiprock Peak and Hogback Mountain, and sailed down through the picturesque Chuskas past road signs that beckoned toward far-off, mysterious places like Toadlena, Beautiful Mountain, Coyote Wash, Nakaibito, Pueblo Bonito (Lovely Village) and Ojo Caliente (Hot Eye).

Kitty made the time pass quickly by singing the praises of the desert, pointing out spots of historic interest, and telling them Navajo legends.

"The Wind People, who ride the lightning, own all of these box canyons and hilltops," she said half seriously. "No Navajo will build his hogan near such places, or where lightning has

struck. If he did, he thinks the Wind People would give him bad headaches."

"It gives me a bad headache trying to understand why your Navajos love a godforsaken place like this," Ralph said.

"Your Utes live here too!" Kitty's eyes flashed.

"Only because white men drove us off our good land farther north," Ralph snapped. "We put up a good fight before they expelled us, too. My grandfather was one of Chief Douglas' warriors, back in 1879, when the Utes surrounded and almost destroyed an entire U.S. Army detachment that invaded our White River reservation."

"The Navajos got *their* reservation back," Kitty pointed out.

"Don't squabble, children," Hall said and added, to break the tension, "I heard a rumor that you're going to the Squaw Dance together next week. Is that right?"

Kitty blushed and Ralph nodded.

"That's the same as becoming engaged, isn't it?"

"If our uncles approve," Kitty admitted.

"Well, here's a tip from an old bachelor: Don't bicker about things that happened long ago, and don't hold grudges. We're all Americans today, no matter how our skins are colored."

"I'll be good," Kitty promised. "And that reminds me. Will you all be good and come to dinner with Mother and me tonight?"

When they pulled up to the motel at Window Rock, an Indian wearing a Hopi hairband rose from where he had been squatting near the entrance and handed Ralph a message. The driller read it and turned to the others with a frown.

"It's from Chief Ponytooth," he explained. "He says the Hopis and Navajos are having a session at the Council Hall tonight and he wants me there as a representative of the Utes. Looks as if I'll have to eat and run."

"Dinner will be early," Kitty promised.

"Wait here till I make a quick visit to the Indian Agency," Hall said. "Then we'll walk over to your house. I'm tired of riding."

Sandy had expected that Kitty might live in an eight-sided wooden hogan such as he had seen in other parts of the reservation. Instead, she took them to a neat white cottage surrounded by paloverde trees.

Mrs. Gonzales was an attractive widow who might have passed for Kitty's older sister, except that she was somewhat heavier and her skin was much darker. She greeted the two older men as if they were members of the family and made Sandy feel at home immediately. First, she showed them around the tiny forge and workshop where she apparently earned a good living by making lovely silver buckles and heavy medallions called conchas which she sold to tourists. Then, after

learning that Ralph had to leave soon, she rushed dinner to the table. It featured several highly spiced Mexican and Indian dishes and was delicious.

After coffee, they stood under the stars for a few minutes on a patio looking toward the great black hole in Window Rock.

"What is the light that twinkles on the cliff these days?" Mrs. Gonzales asked as she pointed upward with pursed lips.

"Bad man!" she sniffed after Hall explained that it was Cavanaugh's light beam.

"What do you know about him, Mother?" Ralph asked.

"Nothing good." She crossed her arms in the wide sleeves of her embroidered blouse to keep the evening chill away. "He came here in the early '50s, looking for uranium. Pablo, my poor husband, was a prospector too in those days, and knew every foot of this reservation. Cavanaugh went into partnership with him, but somehow, he never got round to signing a contract.

"They made a strike too—one of the biggest. Cavanaugh sold the claim for much money, just before the government stopped buying ore. He forgot all his promises then, and went away. Pablo's heart broke when the man he thought was his friend betrayed him." She sighed deeply.

"Now Cavanaugh has returned," she went on at last, "like the Spaniards who used to descend on us Indians like locusts when they needed more money. He is not good for this country."

"He certainly is riding a high horse today," Hall agreed. "When I was at the Agency he came stalking in with Pepper behind him, leading two of his big dogs on leashes. He looked just like the cat that ate the canary as he submitted a pile of sealed bids a foot high. I sure do wish I knew what he was up to."

"If I didn't have to attend the Council meeting," Ralph said regretfully, "I could take the 'ear' up to his camp and find out, maybe."

Kitty insisted on walking them back to town. She and Ralph went arm-in-arm until Hall met another oilman, got into a business discussion, and called his driller back to take part in it. Sandy and the girl continued on together.

Cavanaugh came out of the motel as they approached. Quite evidently, the redhaired man had had a few drinks.

"Well!" he said as he recognized them. "If it isn't the squaw who kicked me out of school, with her little squaw man!" He stood in their path, swaying ever so slightly.

"Get out of our way, please," Sandy said, fighting down his fury at the words.

For answer, Cavanaugh swung a brawny arm and struck the boy across the mouth with the back of a hairy hand.

Sandy staggered from the unexpected blow, then charged, fists flying. He connected several times, but he might as well have hit a brick wall. His 155 pounds made no impression on Cavanaugh's 200-plus.

"So you think you can fight the man who made three touchdowns against California," Cavanaugh bawled drunkenly. "Well, take this for being an Injun lover!" He swung a short right to the jaw that snapped Sandy's head back. "And this for your Injun-loving boss!" He followed with a stunning left. "And this for your snooty Ute!" He swung a haymaker that smashed through the boy's weakened guard and hit his solar plexus like a bolt of lightning.

As he lay in the gutter, gasping desperately for breath, Sandy thought he heard the sound of running feet.

"And this," Cavanaugh said deliberately, "is just part of what I owe Donovan for calling me a liar. Won't he look like a fool tomorrow if my high sign comes through?"

Through bleared eyes, Sandy saw his enemy push Kitty aside and swing a heavy boot at his ribs.

At that moment, Ralph plunged into the little

circle of lamplight. The Indian gripped Cavanaugh by one beefy shoulder and spun him around.

"This," he raged, "is for a skunk who picks on people half his size and kicks them when they're down!"

He dealt the bully a smashing blow under the ear.

"Fight! Fight!" somebody in the motel yelled. In an instant the building poured forth a mob of oilmen. They gathered in a circle around the combatants and shouted encouragement. A few of them egged Cavanaugh on, but the majority were rooting for his opponent.

Sandy sat up groggily, dabbed at his bleeding lips, and watched the battle with growing excitement. Ralph was many pounds lighter than the redhead, but he made up for that by being fast as a rattler. He avoided the big man's efforts to go into a clinch that would give him time to clear his head of that first murderous punch. He danced about as his ancestors must have done at their buffalo ceremonials. He struck again and again—short, stabbing blows that soon cut Cavanaugh's face to ribbons and closed his right eye.

The bully was no coward though, Sandy was surprised to discover. He fought doggedly, and managed to get in some damaging blows to the body that made his supporters cheer. But Ralph's

long reach held him too far away. He could not use his great strength to advantage. And it was plain that he was badly out of condition. Before three minutes had passed he was becoming winded.

"Kill the big bum, Fisheater," a Navajo whooped from the edge of the crowd. "He asked for it. Kill 'im."

"With pleasure," Ralph answered. "Watch this, benighted Navajo. I learned it in Uncle Sam's Navy."

He started a right, almost from the pavement. Up and up it came, completely under Cavanaugh's guard. It landed on the point of his chin with a crack like that of a whip!

The big man threw out his arms wildly, rocked back on his heels, and came crashing down, as a tree falls, into the gutter beside Sandy. He scrabbled about there for a moment, managed to get halfway to his knees, then slid forward on his face. Out!

The Navajo threw his big black cowboy hat on the street, jumped up and down on it in utter joy, and sent warwhoop after warwhoop echoing through the little town.

"Hand me my coat, John," Ralph said to the producer, who had been coaching him from the sidelines. "If I don't hurry, I'll be late for that meeting."

Kitty, who had stood close beside Sandy throughout the battle, alternately wringing her hands and jumping up and down with excitement as Ralph seemed to be getting the worst or best of it, now ran forward. As the crowd cheered again, she hugged her man until he had to beg her to spare his bruised ribs.

"Kitty," said Hall, when Ralph had been carried away on the shoulders of admiring Navajos and Hopis who had run over from the Council Hall to witness the fracas, "will you take Sandy home and patch him up? He has a pretty deep cut on his cheekbone. Better drive him over in the jeep, if he feels like he looks.

"I've got to talk to Ken White about Cavanaugh. This situation is getting out of hand. I'll come over as soon as I can."

Half an hour later, Sandy pushed aside the cold compresses that Mrs. Gonzales had been applying to his face and sat bolt upright on the couch where he had been lying.

"Kitty," he gasped. "I just thought! What was it Cavanaugh said about a high sign or something?"

"When he was getting ready to kick you, you mean?" she frowned.

"Yes. It had to do with Donovan, I think. I was pretty groggy at the time."

"Oh! He said something like 'Won't Donovan

feel like a fool tomorrow if my high sign comes through!' "

"That's it! That's it!" Sandy yelled as he pushed Mrs. Gonzales' fluttering hands away and scrambled to his feet. "It could only mean that he's expecting some sort of message tonight over his light beam. Ralph's tied up, so I've got to go up there and try to find out what it is."

"Don't be silly," said Kitty. "You've taken a bad beating. You're in no condition to go anywhere."

"But I've got to go," he pleaded. "This may mean everything to John, and Don, and, yes, to you and Ralph too. I'm the only one who knows how to operate the 'ear.' I'm going right now. And you're going to help me!"

CHAPTER THIRTEEN

Think Like a Dog

"BUT *how* do I go about feeling like a dog?" Sandy groaned after he had explained his plan of action.

"You shouldn't have any trouble about that." Kitty smiled tenderly as she patted the last strip of bandage in place on his cheek. "You must feel awful."

"That's not what I mean. When Ralph went into Cavanaugh's camp at Elbow Rock he wore a dog skin and made himself smell like a dog. But he said that wasn't enough. He also had to feel and think like one. There's a skin in the jeep. And you must know a kennel where I can roll around and get the smell. But how about the rest of it?

"Of course I've read *The Call of the Wild,* but that's only Jack London's *idea* of how dogs think. What I've got to find out quick is how they really feel."

"I am an Indian," Mrs. Gonzales spoke up suddenly. "Indians are wise in the ways of animals.

You have heard that Indians of the old days were the world's best horsemen, although they used no saddles, and sometimes no bridles. Why? I say it was because they could talk with their horses. Yes, and they honored their mounts as no other people have ever done by printing what was called a pat hand on the rumps of those who helped them win battles." She held up the palm of her hand to show what she meant.

"Then there are our totems. Animals, all of them. To be a member of the buffalo clan, a young brave had to study the wild herds until he knew their every thought—what frightened them, what pastures they preferred, their mating habits. All that.

"What of the great cattle and sheep herds in which modern Navajos take such pride? They thrive where it seems only jack rabbits could live because their herdsmen understand their every need, care for them as if they were children, and weep, as for children, when they are injured or die.

"And consider the Hopi snake dances. Why should the rattlers not bite the dancers, except that they are friends? You do not believe me, Sandy?"

"Well," he gulped, "it's just that I am not an Indian . . ."

"But white men have been the friends of dogs

since time began. You can learn to remember how a cave man felt when he and his dog slept back to back to protect themselves against the howling things outside in the night. You want to be among dogs, Sandy? Very well, I will call them here."

She closed her black eyes and sat swaying slowly from side to side, making an almost inaudible whining, snuffling noise through her nose.

A dog barked questioningly in the distance. Another answered, nearer. Within minutes, three scrawny mutts were scratching at the screen door of the cottage.

"You must remember that dogs are always hungry," Mrs. Gonzales said as she let the animals in and went to the kitchen to find scraps for them, "so you must think of food at all times. You must remember that they are loyal, even though their master beats them, so you must not let your hatred or distrust of Cavanaugh into your mind when you approach his camp. You must be sleepy . . . oh so sleepy . . . so that you do not wake them from their dreams of chasing rabbits, or bigger game.

"Also," she said thoughtfully, "it would be wise to remove all your clothing except the dog skin before you approach. There will not be so much man smell to overcome. Now play with these dogs for a time to get their scent on you. Then Kitty

will drive you as near the camp as she dares. And may the blessings of the good Jesus and Mary, and the water and wind people, ride with you."

Kitty was at the wheel as the jeep skirted the town and headed up a steep trail that had been chopped through the mesquite for the benefit of tourists who liked to snap their everlasting cameras from the top of the Rock. It was much too late for tourists to be out, however, so they had the road to themselves. This was a good thing, since they dared not use the car lights and had to depend on what little illumination was provided by a half-moon.

Sandy sat fingering Maisie's hide nervously and holding the "ear" on his lap to protect it from bumps. From time to time, as they twisted and turned, he got glimpses of Cavanaugh's beam far above. It twinkled without interruption and was hard to distinguish among the stars.

"Pepper must be playing music," he said softly at last. "Ralph says the beam fades up and down when a two-way conversation is going on. We're still in time."

"Are you sure you ought to be doing this?" Kitty asked unhappily. "John wouldn't have let you go if he had known about it, I'm certain."

"That's why I was in such a hurry to start before he returned from the Agency. Ralph isn't here, so

I'm the only person who knows how to operate this gadget. I have to go through with it."

"But why do you have to?" she demanded. "Why not leave it up to the Agency and the Navajo police?"

"Because I have only a hunch to go on—the kind of hunch that Mother says Kit Carson used to have. I haven't any proof that Cavanaugh is planning to play some sort of dirty trick on the Indians tomorrow, or that his plans may depend on what comes over the beam. The police would laugh at me. I've *got* to do it my way."

"I guess you do," the girl agreed. "You'll have to walk the rest of the way," she added, driving the car off the trail and into a thicket as the lights shining from Cavanaugh's trailer showed up on the skyline ahead.

When Sandy climbed out, strapped the "ear" to his chest and started away, she called him back sharply.

"Take your clothes off here and put them in the back of the jeep," she commanded. "You'd never find them on the trail."

"But . . ."

"Do as I say, silly. And hurry. I'm scared."

"I'm scareder than you are, I'll bet," Sandy said grumpily as he obeyed.

The cold night wind hit his bare skin and he started shivering.

Well, he thought as he started away through the darkness, that was all to the good. Dogs shivered all the time, didn't they? And the hide offered some protection.

It seemed to take him an age to reach the vicinity of the trailer. Once he stubbed his toe badly, and once he cut his foot on a sharp rock. Confound that Kitty! He needed his shoes. Still, shoes did smell pretty strong sometimes. He grinned in spite of himself.

A hundred yards from the trailer he got down on hands and knees, started to crawl forward, then stopped with a jerk.

Dogs usually didn't take kindly to strangers of their own kind! How many times had he seen them set upon an outsider and send him yipping for his life. Maybe the foreigner had come looking for a fight, though! He, Sandy, would be the friendliest doggy in seven states! He did his best to imitate the low whimpering that Mrs. Gonzales had used as he crept forward. If Ralph could get away with this, there was no reason why Sandy Carson Steele couldn't!

He was only a few feet from the trailer when three big brutes, who had been sleeping under its wheels, rose and advanced toward him, stiff-legged. This was it!

Desperately, Sandy tried to project the idea through his soft whining that he was hungry, and

cold, and wet with dew, and only wanted a quiet place where he could spend the night under the protection of those splendid humans, Cavanaugh and Pepper March.

For a moment, he thought he had got the idea across. The dogs hesistated. They seemed to confer among themselves. But they were not quite satisfied. The lead animal bared his long white teeth and barked a tentative challenge. The others followed his example as they sidled toward this strange creature who certainly smelled like a dog but who looked—well, looked somewhat queer, to say the least.

A quotation his father once had repeated flashed through Sandy's mind: *The minds of dogs do not benefit by being treated as though they were the minds of men.* As the barking grew louder, he gathered himself and prepared to go away from that place as fast as his bare feet could carry him.

The trailer door banged open. A shaft of light illuminated the yard but mercifully did not reach to the spot where Sandy crouched.

"Shut up, you idiotic mutts!" Cavanaugh yelled. Then to Pepper, who appeared in the doorway behind him, "Can't you make those confounded dogs keep quiet? They're driving me insane."

"I'm sorry, Red," Pepper answered. "You brought the dogs here to guard the trailer."

" 'Red. Red. Red,' " snarled the big man, who plainly was feeling the effects of the beating Ralph had given him. "I'm sick of your crawling and fawning. Why weren't you at Window Rock tonight when the whole town ganged up on me?"

"When Andy quit today, you told me to stay here and take care of the beam, Red," Pepper answered patiently. "I'm sorry, Red."

"From now on, call me Mister Cavanaugh," his boss raged.

"Yes, *Mister* Cavanaugh . . . sir." Pepper's voice still was soft but Sandy could see his fists clench.

"And stop that confounded record. Highbrow music gives me the willies. Always has! Call Elbow Rock and see if the message has come through."

"Yes, sir. At once, sir." The door slammed and the voices became a mumble.

Sandy tried to still the beating of his heart as he whined canine terror at this outburst. The "other" dogs whimpered uncertainly. Finally they crept back to their sleeping places. Evidently their master didn't approve of their warning. In that case . . . Sandy could almost feel them relax as they turned round and round in their nests, trying to find the most comfortable spots for slumber.

Carefully he edged forward until he was lying among them. Then he turned the switch that fed power from a series of flashlight batteries into the

transistors mounted on the "ear," adjusted the headphones, and listened.

"Calling Elbow Rock. Calling Elbow Rock. Over," he heard Pepper say.

There was no answer.

"Calling Elbow Rock. Window Rock calling Elbow Rock. Over," Pepper repeated.

Still no answer.

"Come in, Elbow Rock!" Cavanaugh's voice barked through the phones. "Why don't you answer, Elbow Rock?"

"I read you, Window Rock," a faraway voice answered at last. "Something's coming in from Gallup. Stand by."

"This is it!" Cavanaugh's yell almost split Sandy's ears. "Get out of the way, can't you, Pepper? I'll take this. Go to bed or something. It makes me sick just to look at your silly face. . . . All right, Elbow Rock. I'm ready when you are."

The minutes slid by while only the mutter of static filled Sandy's earphones. Beside him, he felt the Dobermans flinch and shiver in their restless sleep. The cold night wind seeped under the bottom of the trailer and set his teeth to chattering uncontrollably. Now he knew what the phrase "a dog's life" really meant.

"Elbow Rock calling Window Rock." The phones clattered into life. "Over."

"I read you loud and clear, Elbow Rock,"

Cavanaugh's voice replied. "What is the message from Gallup?"

"You want it coded, like it was relayed from Washington, or straight?" the distant voice inquired.

"Straight, you fool. Nobody listens in on a light beam."

"You never know," said the man at Elbow Rock. "Well, here's your message, as well as I can dope it out. It's from your 'keyhole man,' Mr. —"

"Never mind his name," Cavanaugh snapped. "Just give me the message."

"O.K.! O.K.! Take it easy, will you, boss? Here 'tis: Quote: Have picked up leak from strictly official source. Next month U.S. government starts buying uranium ore from all comers again. Expanding space ship and power reactor program has increased demand for atomic fuels to such an extent that existing mills no longer can supply it —Are you reading me all right, boss?"

"Clear as a bell," Cavanaugh crooned. "This is wonderful. Go on. Go on."

"Here's the rest of it: Quote: Announcement of policy change withheld until middle of next month so it won't upset bids to be opened tomorrow at Window Rock and similar places. Happy hunting. Unquote. Over."

"Whoopee!" Cavanaugh yelled the word into the microphone so loudly that Sandy's earphones

rattled. "Boy! This came through just in time. Otherwise, I'd have had to cancel all of those high bids I made today or go bankrupt tomorrow. Now I'll be in clover with most of the good leases sewed up at rock-bottom prices before the boom starts. Thank you, Elbow Rock. There's a bonus for you in this. Over and out."

"Roger!" came the delighted answer.

"Did you hear all of that, Pepper?" Cavanaugh asked.

"Was I supposed to, Mister Cavanaugh . . . sir?" Pepper answered off-mike. His voice was bitter.

"Oh, don't be sore, boy." Cavanaugh roared with laughter. "If you'd taken the beating I took tonight from Hall's gang of toughs, you'd have been grouchy, too. And no more of that 'Mister Cavanaugh' stuff. Just call me 'Red.' We're pals."

"Are we?"

"Sure we are. We'll both get rich out of this. And even better, we'll do the Indian Agency and the whole Navajo nation in the eye. If they accept my bids—and they'll have to, because they're higher than those of anyone else—we'll get those leases for a half, or even a third, of what'd they'd sell for next month when the policy change is announced."

In his hiding place under the trailer floor, Sandy was boiling with fury. Momentarily he had

forgotten all about being a dog. The Dobermans sensed the difference instantly. Perhaps they caught a subtle change in his body odor. His anger was making him perspire despite the cold.

The lead dog barked sharply and scrambled to its feet. The others followed suit. Sandy tried to croon reassurance to them, but failed. They were becoming thoroughly aroused and making an awful racket. He had to get out of there—and quickly—before Cavanaugh came to investigate.

He scrambled from under the trailer and sprinted for the jeep. The dogs broke into full cry now, and streaked after him. This was a human! And an enemy human too! They were out to make him pay dearly for his deceit.

The trailer door banged open as the bedlam rose. Moments later, a spotlight picked up the running boy and the dogs that leaped and snapped at his bare heels.

"Stop, thief!" Cavanaugh yelled. "Stop or I'll fire!"

CHAPTER FOURTEEN

Showdown

AT THAT MOMENT, Sandy tripped over a branch, flung up his arms as he fell headlong. The rifle bullet meant for his head merely creased him instead, from shoulder to elbow.

He scrambled behind a large rock, managed to get to his feet, and faced the gleaming eyes of the oncoming dogs. Something that Quiz once had read to him out of a sports magazine flashed through his mind: "If attacked by vicious dogs, hold out some object, such as your hat, at waist height. They will hesitate while they decide whether to leap over it or under it, thus giving you an advantage."

His left arm was numb from the shock of the bullet, but he managed to use it to rip the dog skin from around his waist and hold it forward. As the dogs whined and tried to make up their minds as to the best method of attack, he tore the board on which the "ear" was mounted from

his chest with his good hand. Thank heaven, one end of the plank had been whittled down into a sort of handle, for easier carrying.

Then he charged, swinging the improvised club like a demon.

Luckily, his first blow landed squarely on the snout of a leaping dog!

Sparks flashed. Pieces of equipment flew in all directions. The animal howled and rolled on the ground, holding its nose with both paws. Its companions backed away.

Sandy followed up his advantage. He struck again and again. The dogs fled, howling, to a safe distance.

To the right of him, the boy now heard the pounding of human feet. Cavanaugh had abandoned a frontal attack for the moment and was sprinting to cut him off from the road leading back to the village.

"Don't kill him, Red," Pepper was shouting. "It would be murder."

"Nobody's going to kill anybody—yet," Cavanaugh yelled as he ran. "But we can't let him get away, after what he may have heard. Rig another floodlight. Then come over here and help me."

Forgetful of the thorns that tore his skin and the rocks that cut his knees, Sandy wriggled, Indian fashion, into a darker spot. In his bare

feet, he had no chance of reaching the road ahead of Cavanaugh, or even of staying out of his way. Keeping a wary eye on the dogs that still followed, whining with uncertainty, he ripped Maisie's hide into pieces and bound them under his feet. There. That would be better!

He made a feint for the road now—and ducked as another bullet whispered overhead and smacked into a nearby tree.

He was in a real spot! If he tried to cross the bare top of the natural bridge that arched over the hole in Window Rock, he would make an ideal target, silhouetted against the moon. (Thank all the little Navajo gods and demons that Cavanaugh's right eye must be swollen shut from the beating Ralph had given him. He was in no condition to shoot accurately even if he disregarded Pepper's warning.)

Sandy decided that his best strategy lay in hiding among the mesquite and sagebrush thickets under the pine trees that covered the side of the rock nearest the village. Kitty must have heard the racket. Perhaps she would understand what was happening and head for town to get help.

A whoop of delight, followed by several quick shots, made his heart sink.

"That jeep will never move again," he heard Cavanaugh yell. The next words made him feel

much better. "Come on out of the woods, driver, and give yourself up. I've got you cut off from the road."

Sandy dithered in his hiding place. He was feeling decidedly queer all of a sudden. The fact that his left hand felt wet and slippery brought him up short. He was bleeding steadily from that wound in his shoulder. He tried dabbing sand on the crease, but it didn't stop the flow. Another fifteen or twenty minutes and he would be so weak that he would fall easy prey to his pursuers.

"Bring flashlights out here," Cavanaugh was shouting to Pepper now. "We'll beat the woods for the driver first."

Sandy bit his cold lips. Time was running out. He had to act, and act fast, before he keeled over from loss of blood. Should he throw himself on Pepper's mercy? But, even granted that his old rival wouldn't betray him, what good would that do? Cavanaugh had the gun!

The sight of the blond boy walking reluctantly into the woods through the floodlight glare, with a heavy flashlight in either hand, gave him an idea.

Or was it Quiz who told him what to do? He shook his head dazedly. Almost, he could hear Quiz saying: "Where would Professor Moriarty least expect to find you, Sherlock Holmes?"

"Elementary, my dear Dr. Watson," he whispered in reply. "In the trailer, of course."

Gripping the breadboard in both hands, he made a last weak lunge at the circling Dobermans. They fled, yelping, from this blood-spattered terror.

Then he crawled frantically toward the open trailer door.

Safe inside, and with the door locked behind him, he hung onto a table and stared about him with eyes that were beginning to go out of focus.

He should find a cloth with which to bind up his wound, he knew. But he had no time.

The glittering light-beam mechanism caught his attention. That was the key to the whole situation! It must project a million candle-power, at least, to be seen at Elbow Rock. If he could turn it on Window Rock it would light up the village as bright as day.

There must be a wheel or something by which the light could be moved. . . . There it was! On the control board to the right!

He twisted the little chrome wheel frantically, watching through a window as he did so. At first his aim was wild. Then, every street and building in Window Rock leaped into view, as though outlined by a lightning stroke.

There! That would tell them something was wrong up here.

He was sleepy and tired after all that effort. So sleepy! He sank into a chair in front of the beam

console and pillowed his head on his bloody arms.

But something nagged him. What he had done wasn't enough. Kitty was out there alone in the woods. Cavanaugh might come pounding on the trailer door at any moment. He had to tell them . . . tell them . . . tell them what? Why, where he was, and what was happening, naturally!

He jerked himself upright and started tearing at the mass of wiring that ran to the light beam modulator. Finally he got down to the heavy insulated lead-in wires . . . tore them loose.

The beam illuminating the village died away.

He slapped the leads together. The light blinked on.

"SOS," he heliographed in Morse code remembered from Scouting field trips. "SOS. May Day. May Day."

Surely somebody at Window Rock would know the code. Certainly Ralph did. He repeated the international distress calls again and again.

"SOS. May Day!" he spelled out, his cold fingers making many mistakes. "Sandy Steele and Kitty on the Rock. Cavanaugh trying to kill us. Send help. SOS. May Day! Sandy Steele and Kitty on the Rock. Cavanaugh . . ."

He fell forward across the console.

The smash of some heavy object against the door brought him back to semi-consciousness.

"Stop that!" Cavanaugh was yelling. "Stop it

or I will kill you. Stop it. Stop it!" The man sounded completely insane now.

The door bulged, then broke loose from its hinges under a rain of blows.

Cavanaugh stood in the entrace, his good eye wild and rolling, his rifle pointed. Behind him, Pepper appeared, still holding one of the heavy flashlights.

"An Injun," Cavanaugh gloated without recognition as he took in Sandy's dirt-smeared, blood-caked body. "One of Hall's dirty, stinking Injuns. This will teach you!"

His finger tightened on the trigger.

"Pepper!" Sandy gasped with the last remnant of his strength. "Don't let him kill me, Pepper!"

He slid to the floor as the gun went off.

CHAPTER FIFTEEN

The Fourth Touchdown

SANDY FOUGHT HIS WAY UP from unconsciousness like a diver rising from the bottom of a dark sea. For a long time he lay without moving as he tried to sort out the sounds around him. He was dead, of course, he reasoned. Nevertheless, some of the voices he seemed to hear sounded familiar.

He opened one eye experimentally, prepared to snap it shut if he didn't like what he saw. Mrs. Gonzales was bending over him with one of her eternal compresses. So was a man with a goatee who had a stethoscope clipped around his neck.

Sandy opened the other eye and turned his head, which seemed to weigh a ton.

He found that he was in bed and bandaged right up to his chin. Kitty, her pretty face badly scratched, was watching him too. So were John Hall and . . . yes, it was Pepper!

"But I *ought* to be dead," Sandy whispered in great surprise. "What happened?"

"I conked Cavanaugh with his own flashlight," Pepper said with pride. "Knocked him out. His shot went wild."

"Thanks a lot, Pepper. Shake." Sandy tried to hold out his hand but found he couldn't quite make it.

"Easy," said the doctor.

"Am I badly hurt?" Sandy managed to say.

"Nothing worse than loss of a lot of blood. I've pumped you full of plasma. You'll be all right in a few days, but you mustn't exert yourself for a while," said the doctor as he started packing instruments into his little black bag.

"But I've *got* to know what happened," Sandy said fretfully. "For Pete's *sake!*"

"I called Kitty out of the woods after I hit Cavanaugh," Pepper explained. "We got you into his car and brought you home as fast as we could."

"And you're all right, Kitty?" Sandy persisted.

"Just a few scratches and bruises." She came forward to prove it and patted his bandaged shoulder.

"And . . . and Cavanaugh?"

"The crazy fool is still up there," Hall spoke up. "Look." He pointed through the bedroom window.

Sandy worked his head around in that direction. The great hump of the Window Rock was lit up as bright as day.

"Floodlights," Hall explained as he saw the boy's surprise. "They're set up permanently to illuminate the Rock on Frontier Day and for other tourist events."

"But . . ."

"The Navajo police turned them on. The whole force, as well as most of the Indians who attended the joint Council meeting, are up there trying to flush Cavanaugh out of hiding."

"Ralph too?" Sandy's eyes were shining.

"Yes."

"Did the Council meeting come to anything, Mr.—John?"

"It broke up before any formal agreement was signed when we got your message, but . . ."

"Gee, I'm sorry about that."

"Forget it. I only had the chance to say a few words to Ralph while they were organizing the posse, but he told me the tribes understand each other's position now. It's just a matter of ironing out details before they agree to put those boundary-line leases up for bids."

"That'll be great for you," Sandy said, "but I sure wish I hadn't had to . . ."

"Forget it, I said." Hall patted his shoulder too. (Why did everybody have to pat him as if he were a dog? Sandy wondered crossly. Then he burst out laughing, although to do so hurt his face and

chest. Why, he almost *was* a dog, wasn't he?)

"Young man, you're getting much too excited," the doctor warned as he approached the bed, hypodermic needle in hand. "I'd better put you to sleep for a while."

Sandy pushed him away.

"There's something else," he cried. "John, did Pepper tell you about the message Cavanaugh received from Washington?"

"I told him there had been a message, and what Cavanaugh said to Elbow Rock," Pepper spoke up. "But I couldn't hear the message itself. Cavanaugh was wearing the earphones."

"Better forget all this for a while and go to sleep, Sandy," said Hall. His face was gaunt with worry.

"No! You must listen now."

Sandy wanted desperately to go to sleep, but he wouldn't let himself give in. Slowly, forcing each word out of his mouth as though it weighed several pounds, he repeated the message to Cavanaugh as well as he could remember it.

"Good Lord!" Hall gasped. "This changes the whole picture. I must call Ken!"

He rushed to the telephone while Sandy's eyelids closed in spite of his efforts to keep them open. He just *had* to have a few minutes' sleep.

White's arrival at the cottage jerked him awake

again. The Agent was wearing heavy boots and carried a pair of binoculars slung over his pudgy shoulder.

"What's all this, John?" he demanded. "I was just leaving from the Rock when you called. I sent off an inquiry to the Department of Interior immediately, of course. Then this message came in from San Francisco. That's what took me so long getting here. The message is for you, Sandy."

"Read it to me, please," the boy said. "I'm too weak to lift a finger."

White ripped open the yellow envelope, got out his glasses, and read:

FINALLY GOT HERE STOP NEWSPAPER FILES SHOW THERE WAS CAVANAUGH ON STATE TEAM IN 1930 WHO MADE ALL-AMERICAN STOP BUT HE WAS CALLED BRICK NOT RED STOP ALL SPORTS PAGE STORIES ON BIG GAME SAY HE MADE FOUR TOUCHDOWNS REPEAT FOUR TOUCHDOWNS AGAINST CALIFORNIA STOP QUIZ TAYLOR

"Aw shucks," Pepper said disgustedly. "That proves our Cavanaugh isn't an impostor after all."

"Wait a minute! Wait a minute!" Sandy dragged himself up on one elbow despite Mrs. Gonzales' efforts to make him lie still. "It proves no such thing!"

"But if he did make those three touchdowns he was always bragging about . . ." Pepper started to protest.

"*Four* touchdowns, the telegram says," Sandy panted. "Now look, all of you. Maybe a real football player might *add* a touchdown to his record if he thought no one would catch him at it. But who would *subtract* a touchdown? Nobody. That's who!

"Cavanaugh is a phony, I tell you. Whoever he really is, he wanted to impress people, and keep them from asking too many personal questions when he went to Valley View and started building his lab with the money he had stolen from Mr. Gonzales. He remembered that there was another Cavanaugh on the State team, so he took his identity. But the game had been played so many years ago that he got the details wrong, see? I'll bet that, if we start digging into his past, we'll find lots of other queer things."

"We'll need to do a lot of digging, too, to make any charges stick against him after we catch him," White said grimly.

"What do you mean?" Hall exploded. "He's guilty of attempted homicide, defrauding the Indians, disturbing the peace, and I don't know what all else."

"Oh, he's guilty all right," the Agent agreed,

"but could you prove that to a jury, particularly out here where so many people still think that the only good Indian is a dead Indian?"

"Oh, you're being an old woman, Ken," the oilman snapped.

"Maybe so, John. Maybe so. But I've been in this business a long time. If Cavanaugh or whoever he is hadn't lost his head, he would have come right down here and given himself up. Then his lawyers could have claimed that he was only defending his property from a prowler. No. No. Shut up and listen to me. People are awful touchy about property rights out here. Remember what they used to do to cattle rustlers—still do, for that matter, on occasion.

"And now about this message that Sandy heard: Cavanaugh's lawyers would say 'Prove it!' And what real proof have we got? We'd be putting up the word of a minor who *did* prowl—I'm not blaming you, Sandy. You did the only thing possible and your idea of using the light beam to call for help was a stroke of pure genius—but, as I say, the word of a minor against the word of an established businessman who has a lot of friends in these parts."

"Then you don't think . . ." Hall was really shocked.

"I *think* we have a chance of making our charges stick with the help of the information

Quiz has dug up, but I'm not even sure of that. Frankly, if the government doesn't act faster than it usually does, I'm afraid all of Cavanaugh's uranium lease bids may have to be accepted tomorrow. He can claim, you see, that he put them in before the time that he is even *accused* of having received his illegal tip."

"Wow!" Sandy stared at his employer with round eyes. "Well anyway," he added, "the change in policy will give you a chance to develop your own uranium strike on the San Juan."

"Fat lot of good that will do me if Cavanaugh ties us up with a libel and defamation suit," Hall grunted. "Well, Ken, it looks as if we're all in trouble unless . . . what was that?"

They all whirled toward the window.

Far up near the top of Window Rock, pinpoints of light were flashing. The clean, thin sound of rifle shots came down to them through the still desert air.

White snatched at his binoculars and trained them on the mountain. Long moments passed as he fiddled with the focus.

"The idiot!" he almost whispered at last. "The poor scared, hysterical fool. He's making a run for it across the top of the natural bridge!"

Hall snapped off the room light. Somehow, Sandy managed, with Kitty's help, to sit up where he could get a view of the bare slab of rock where

he had almost been tempted to do what Cavanaugh was now trying.

They all held their breath in the darkness as they strained their eyes.

There he was! A tiny black shadow, bent nearly double as he raced madly through the floodlight glare.

"He's going to make it. He's going to make it!" Pepper shouted, his old loyalty to his boss coming to the fore. "Run, Red. *Run!*"

The fleeing man stumbled. He threw up his arms and reeled to the edge of the narrow rock bridge. Almost, he recovered his balance . . .

Then he fell, turning over and over slowly, for a thousand miles, it seemed.

Kitty and her mother screamed together.

"It's better so," White murmured at last as he put his glasses back in their case. "A clean death. Cavanaugh made that fourth touchdown after all."